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NATURALIST'S REPOSITORY,

OR

Monthly Miscellany

OF

EXOTIC NATURAL HISTORY:

CONSISTING OF
ELEGANTLY COLOURED PLATES WITH APPROPRIATE SCIENTIFIC
AND GENERAL DESCRIPTIONS
OF THE MOST CURIOUS, SCARCE, AND BEAUTIFUL
PRODUCTIONS OF NATURE
THAT HAVE BEEN RECENTLY DISCOVERED
IN VARIOUS PARTS OF THE WORLD;
AND MORE ESPECIALLY SUCH
NOVELTIES
As from their extreme Rarity remain entirely undescribed, or which have not been
duly noticed by any preceding Naturalits.
THE WHOLE COMPOSED ACCORDING TO
THE LATEST IMPROVEMENTS IN THE VARIOUS DEPARTMENTS OF
The Science,
AND FORMING COLLECTIVELY A TRULY VALUABLE
COMPENDIUM OF THE MOST IMPORTANT DISCOVERIES
OF
QUADRUPEDS, BIRDS, FISHES, INSECTS, SHELLS,
MARINE PRODUCTIONS,
AND EVERY OTHER INTERESTING OBJECT OF NATURAL HISTORY,
THE PRODUCE OF FOREIGN CLIMATES.

BY E. DONOVAN, F.L.S. W.S. &c.

VOL. II.

London:
PRINTED FOR THE AUTHOR AND W. SIMPKIN AND R. MARSHALL,
STATIONERS' HALL COURT, LUDGATE STREET.

1824.

Smithsonian Institution
OCT 24
193438
National Museum.

Plummer and Brewis, Printers,
Love Lane, Eastcheap.

Table of Contents.

ALPHABETICAL INDEX

TO

VOL. II.

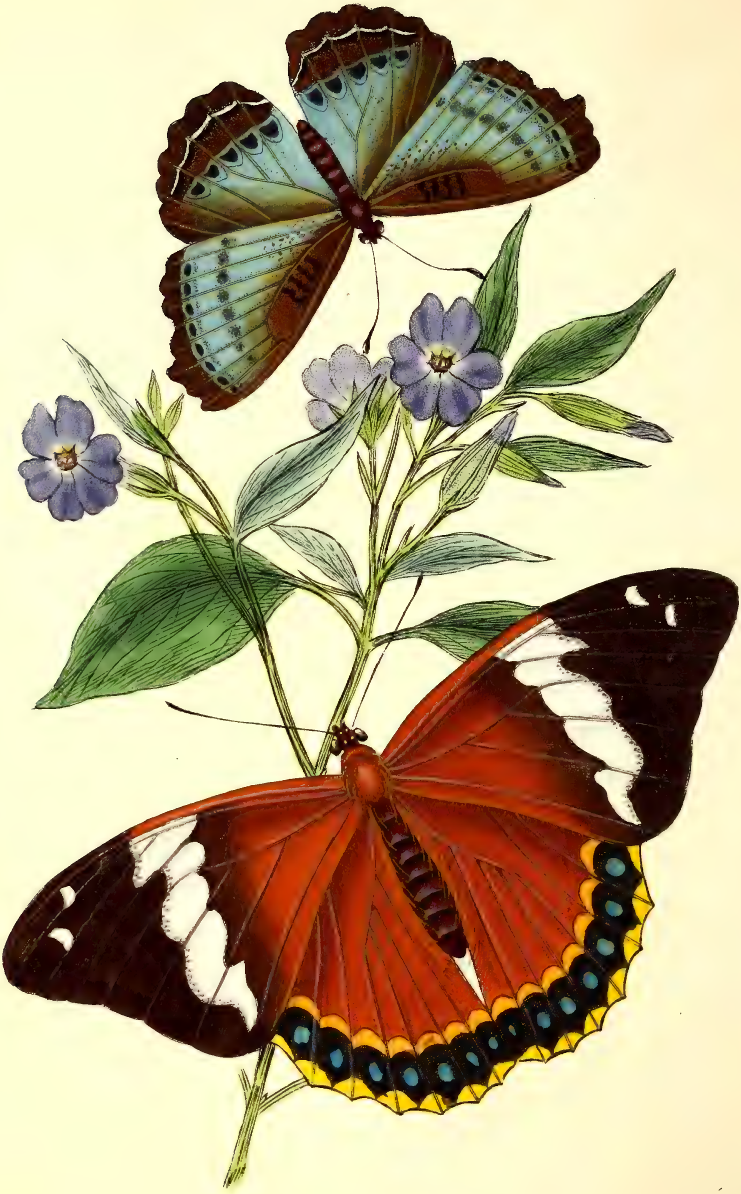
	Plate.	Fig.
Albirostris, Galbula, White-billed King-Fisher	39	
Amalia Papilio, Amalia Butterfly	40	2
Amoena Buprestis	62	2
Aulicus, Chain-spotted Brunette Cone	43	
Aureus Psittacus, Golden-crowned Parrot	72	
Arethusus Papilio, Arethusus Butterfly	47	2
Bicolor Buprestis, Two-coloured Buprestis	70	
Brownii Psittacus, Brown's Parrot	64	
Cayanus Lanius, Cayenne Shrike	42	
Cipris Papilio, Cipris Butterfly	46	1,1
Conchyliophorus Trochus, Carrier Trochus	41	
Cruenta Terebratula, Blood-sprinkled Terebratula, or Lamp Cockle	56	1
Dolicaon Papilio, Dolicaon Butterfly	65	
Donovani Gryllus, Donovan's Locust	69	
Dufresnii Voluta, Dufresné's Volute	61	
Elorea Papilio, Elorea Butterfly	53	
Enothrea Papilio, Enothrea Butterfly	37	1
Episcopalis Voluta, Episcopal Volute	38	
Ferussacii Voluta, Ferussac's Volute	67	
Gabrielis Hesperia, Gabriel Butterfly	44	2
Glaucus Larus, Glaucous Gull	68	
Hydaspes Papilio, Hydaspes Butterfly	60	
Jucunda Buprestis	62	1

ALPHABETICAL INDEX.

	Plate.	Fig.
Lara Papilio, Lara Butterfly	72	
Latissimus Strombus, Winged Strombus, back view	51	
Latissimus Strombus, Winged Strombus, front view	52	
Lesbia Papilio, Lesbia Butterfly	50	
Leucosticta Buprestis	62	3
Manacus Pipra, Black-Capped Manakin	48	
Marica Papilio, Marica Butterfly	37	1
Numilius Papilio, Numilius Butterfly	55	1
Perversa Helix, var Aurea, Perverse Golden Helix	49	
Phalaris Papilio, Phalaris Butterfly	47	1
Phocides Hesperia, Phocides Butterfly	44	2
Poppea Papilio, Poppea Butterfly	54	2
Pulchella Buprestis	62	4
Rubicunda Terebratula, Ruddy Terebratula, or Lamp Cockle	56	2,3,4
Satyrus Simia, Rufous Orang-Outang	57	
Studies of the Heads of Satyrus Simia, Rufous Orang-Outang	58	
Simia Satyrus, Miscellaneous Illustrations of, "Mermaid," &c.	59	
Scapha Voluta, Great Reticulated Boat Shell	46	
Thoracicus Falco, Long-winged Orange-Breasted Hobby	45	
Tobinii Ostracion, Tobin's Trunk-fish	66	
Tulliolus Papilio, Tulliolus Butterfly	55	1
Viridis Ramphastos, Green Toucan	63	

ll

37



London Published by E. Donovan & Mess.rs Simpkin & Marshall, April 1. 1823.

THE

NATURALIST'S REPOSITORY,

&c. &c. &c.

ENTOMOLOGY.

PLATE XXXVII.

PAPILIO MARICA

MARICA'S BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a club: wings erect when at rest. Fly by day.

**** NYMPHALES.

SPECIFIC CHARACTER AND SYNONYMS.

Wings indented, testaceous, tip black. on the anterior wings a white band: posterior pair with cyaneous dots.

PLATE XXXVII.

Papilio Marica: alis dentatis testaceis apice nigris: anticarum fascia alba, posticarum punctis cyaneis.—*Fabr. T.* 3. *p.* 2. *p.* 113. *n.* 346.

Papilio Marica. *Jon. fig. pict.* 5. *tab.* 1.

Every admirer of the works of nature, will we trust, approve of the selection we have made in the present number, as combining at once an assemblage of curious objects, no less pleasing in their appearance than interesting for their scarcity. The Naturalist, we are persuaded, will not withhold his commendation: the introduction of that noble insect Papilio Marica, in particular, will not fail to afford some pleasure, and to be regarded as an object worthy of the opening of a second volume of our scientific labours. Papilio Enothrea is both scarce and singular, and the Galbula Albirostris, or White Billed Jacamar, may be considered as the most unusual species of its tribe. With respect to Papilio Marica, in particular, it should be observed that it is a species of very extraordinary character: it is an insect of great beauty, and in point of magnitude stands almost unrivalled by any other of the Nymphales tribe, to which it appertains: it is no less estimable for its rarity than either its size or beauty, and above all we may very safely pronounce it to be one among the number of those choice insects which Fabricius had made known to the learned world full thirty years ago, through the medium of his "*Entomologia Systematica*;" but of which, notwithstanding such publicity, no figure whatever is to be found in any publication. A representation of this very choice and interesting insect has consequently remained till this late period among the *desiderata* of the Entomologist, and when it is added, as it may be with perfect confidence, that the figure now presented to the reader is a faithful delineation of the individual specimen which Fabricius has described, we must presume that it is not anticipating vainly to believe it must prove acceptable to every Naturalist of this and every other nation where the science is esteemed: the labours of Fabricius as an Entomologist are held in too much regard in every enlightened country to allow any opinion to the contrary.

Papilio Marica is a native of Africa. Fabricius met with it in the Banksian Cabinet. It was from the specimen in that Cabinet, the only one perhaps he ever saw, that the description of the species which now appears in the Fabrician writings was taken, and as it has been already intimated, it is from the same subject, through the kind permission of its late worthy possessor that we are now enabled to present our readers with the figure of it; a circumstance that can leave no doubt respecting the identity of the species. Our good friend, Mr. Jones of Chelsea, had also made a drawing of the same subject, to which Fabricius adverts in his usual manner by a reference to Mr. Jones's drawings: Papilio Marica is represented in the first plate of the Fifth Volume of that collection, *Jon. pict.* 5. *tab.* 1.

This fine Papilio, when the wings are expanded, measures about four inches and a half across the anterior pair, between the tips, and in length from the apex of the head to the extremity of the posterior wings, two inches and nearly one quarter. The head, thorax, and body brown, the former marked with four distinct white points. The anterior wings are a rich testaceous brown, blending towards the middle into dusky, and becoming entirely black on the exterior half. The middle of the wings is traversed by a broad irregularly waved band composed of white spots, which though traversing the darker space in some degree constitutes the boundary line to the inner or testaceous disk of the anterior wings. There are also besides this white band two lunate spots of the same colour upon the black space of the anterior part of the wing, midway between the white band and the exterior margin. The disk of the lower wings is of the same testaceous colour, with a broad posterior limb or border of very singular appearance: it is a band or series of seven* large confluent black spots of a rounded form, with a distinct blue spot in the middle of each. This black band is divided from the testaceous disk by a series of semilunate spots of pale yellowish, and bounded by an indented border of the same colour, which conforming to the incurvate figure of the spots, and the indented margin, form a series of subquadrangular spots of the same yellow colour along the extreme boundary of the wing. This is the appearance of the upper surface. Beneath the colour is pale olive, inclining to purplish. The same white band, so conspicuous across the middle of the upper wings, appears also on the lower surface, and likewise the two white lunate spots. An irregular white line crosses the disk of the posterior wings. Upon the inner disk, formed by the intersection of the white line, there are three orange-coloured spots, with white margins, and towards the outer margin of the wing, a series of irregular spots of a greenish colour.

---

* Fabricius says six blue spots, in which particular his description is at variance with the drawing in the collection of Mr. Jones, to which he refers, and also the insect in the Banksian Cabinet: seven such cærulean spots, instead of six, are very clearly depicted. There is also some slight obscurity in one or two other passages of the Fabrician description, which our present description and figure will enable the Naturalist to amend: the particulars of its secondary character are thus defined in "*Entomologia Systematica*." Corpus magnum, obscure testaceum capite punctis quatuor albis. Alæ anticæ testaceæ, apice atræ fascia lunulisque duabus albis, subtus basi glaucæ maculis transversis, atris, albo marginatis, in medio fascia alba apice griseæ lunulis duabus albis. Posticæ testaceæ, apice nigræ punctis sexcyaneis. Margo ipse maculis flavescentibus. Subtus griseæ maculis tribus flavis annulo albo nigroque cinctis. In medio striga interrupta alba, nigræ innata et versus marginem maculæ virescentes. *Fabr. T.* 3. *p.* 1. 113. *n.* 346.

PAPILIO ENOTHREA

ENOTHREA'S BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker at the tip, and usually terminating in a club: wings erect when at rest. Fly by day.

*** FESTIVI.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings indented, black: disk green: beneath black: costal dot white.

PAPILIO ENOTHREA: alis dentatis nigris: disco viridi, subtus atris: puncto costali albo. *Fabr. Ent. Syst. T.* 3. *p.* 1. 183.

PLATE XXXVII.

Few species of the Papilio tribe present an appearance more extraordinary than P. Enothrea. This is an insect of the middle size, having the margins of the wings pretty deeply indented; the colour a deep fuscous with the disk green: the green forming a broad common band across all the wings. Towards the tip of the anterior wings is a series of lunate spots which forms a kind of boundary line to the green disk of the anterior wings, and a series of five larger spots of the same black colour on the posterior edge of the green disk of the lower wings. There is also a series of somewhat incurvate lines midway between that series of spots and the posterior margin. Beneath, the prevailing colour is blackish, without any shade of green, and is marked with a few obscure sagittate spots, and a white dot on the ribs.

This remarkable insect inhabits Sierra Leone.

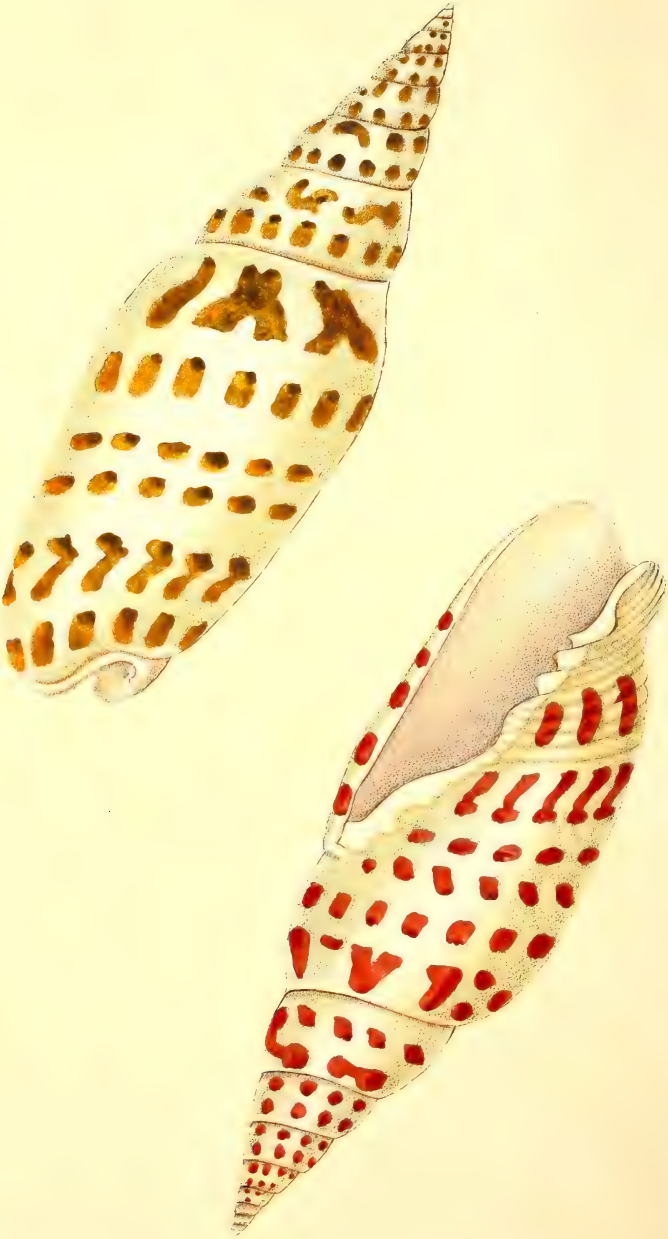
These two curious insects are displayed in the annexed plate in the attitude of resting, with the wings expanded, upon a sprig of the

BROWALLIA ELATA, THE UPRIGHT BROWALLIA,

a variety with violet coloured flowers, that inhabits Peru.

It need scarcely be observed in addition that most species of the Papilio tribe, at the moment they rest from flight, appear with the wings expanded, but that having placed themselves securely by the assistance of their feet upon the plant, or any other body upon which they alight, they throw their wings up in an erect position. There are very few of the Butterfly tribe that do not appear to most advantage when the wings are expanded, and it is for this reason that the artist is almost invariably disposed to represent these insects either in the attitude of flying, or just at the moment when they settle upon a plant or flower to rest. These two insects, *P. Enothrea* in flight, and *P. Marica* in a resting position, form, in our opinion, a very picturesque and even splendid group.

38



London. Published by E. Donovan. & Mess.rs Simpkin & Marshall. April. 1. 1823.

CONCHOLOGY.

PLATE XXXVIII.

VOLUTA EPISCOPALIS

EPISCOPAL VOLUTE.

UNIVALVE.

GENERIC CHARACTER.

Animal a limax. *Linn.* Shell spiral: aperture without a beak and somewhat effuse: pillar twisted or plaited, and generally without lips or perforation.

* FUSIFORM.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell emarginate smooth: margins of the whorls entire: lip denticulate: pillar with four plaits.

PLATE XXXVIII.

Voluta Episcopalis: testa emarginata lævi: anfractuum margine integro, labro denticulato, columella quadriplicata. *Linn. Mus. Lud. Ulr.* 598. *n.* 237.—*Gmel. Linn. Syst. Nat. T.* 1. *p.* vi. *p.* 3459. *n.* 94.

Mitra Episcopi. *Rumpf. Mus. t.* 29 *f. K.*

Mitra, *Argenv. Conch. t.* 9. *f. C.*—*Seba. Mus.* 3. *t.* 51. *f.* 8. 19.—*Bonann. recr. et. Mus. Kircher.* 3. *f.* 130.—*List. Conch. t.* 839. *f.* 66.

Voluta Episcopalis is a shell of conspicuous character and appearance. The form is elegant, long and slender, and tapering gracefully from the more ventricose whorls to the apex of the spire or summit; the mouth is formed with equal symmetry, and the plaits or folds of the pillar lip, the character that associates it with the Voluta tribe, adds not a little to its beauty. This shell varies in length from three to four or five inches.

The singularity of this shell consists principally in the peculiar form and very decided colouring of the spots upon the shell, and which are indeed so very peculiar as to give it a pretty distinct appearance from any other of the known species of the Voluta tribe. The ground colour of the shell is white, more or less inclining to a lacteal yellowish tint, and possessing an inimitable politure of surface, resembling highly glazed porcellain. The spots, which are of a subquadrangular form in general, and of a rich scarlet colour, are by no means confluent: they stand at a distance from each other, leaving an intervening space of white between each, of an equal breadth with the spots themselves. These spots are, nevertheless, disposed in regular and pretty nearly equidistant single or double bands which traverse the whorls of the shell throughout their whole extent. Generally these spots are scarlet, sometimes, though rarely, the spots appear of a deeper red, or more inclining to sanguineous, an example of which is given in the lower part of the plate, and in a few instances that occasionally fall under observation these spots vary from scarlet to a pale fulvous or yellow. This latter mentioned kind, though scarce, appears to be a more common variety than that with darker spots. In some few instances the spots are confluent. We should not omit to notice that there is one other shell of the Voluta tribe which bears a near resemblance to this, and which to the eye of the inexperienced observer might be considered as the same; this is Voluta Papalis. Both these shells are about the same size, and assimilate in form as well as general appearance; but the V. Papalis is striated transversely, while V. Episcopalis is smooth, and the margins of the whorls, which are entire in V. Episcopalis, are denticulated in the V. Papalis: the spots are also less regular in the latter, smaller, more numerous, and of a darker or blood red colour.

The comparative rarity of these two shells has undergone some transition within the space of the last thirty years. Both species have been known from the time of Rumpfius, Kircher and Bonanni, and generally the species V. Papalis has been esteemed more rare than V. Episcopalis. But during a few years past the latter has become far more uncommon, and V. Papalis has occurred less sparingly. Few cabinets are destitute of both these species, it is nevertheless certain that fine specimens of V. Episcopalis are now held in much esteem, being considered valuable, as well on account of the beauty of the species as its increasing scarcity.

Voluta Episcopalis is a native of the Indian Seas. Gmelin observes that the flesh of the Vermes inhabiting those shells are of a poisonous nature if eaten: that they wound those who touch them with a kind of pointed trunk; and that the inhabitants of the Isle of Tanna fix the shells in handles and use them as hatchets. Gmelin states that this shell, when living and in perfection in the sea, is covered with an epidermis, while on the contrary Denis de Montfort declares as clearly that it has no epidermis. We may very safely add upon our own authority that it has an epidermis, of a yellowish testaceous colour, many examples of which have occurred to our observation within the space of the last twenty years.[*]

The modern French writers distinguish this family by the name of Mitre and Mitra, a name given them by Rumpfius, Argenville, and others among the early writers; the character of which as a general distinction consists in the shell being turrited or somewhat fusiform, the tip of the spire acute, base emarginate and without canal or groove. Pillar lip folded, all the folds parallel and transverse, the lower ones smaller: the lip of the pillar thin.[†]

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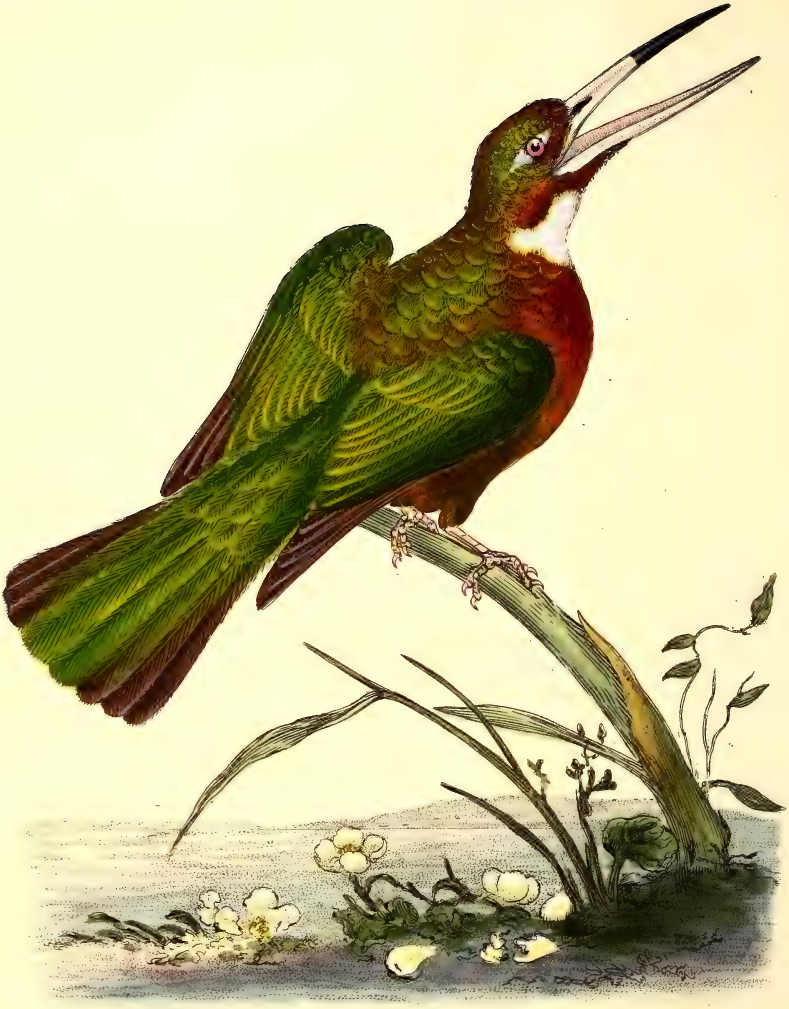
[*] "Subepidermide sordide flava alba maculisque rubris, &c."—*Gmel. T.* 1. *p.* 6. *p.* 3459. 94. "Cette coquille est lisse, sans drap marin ou épiderme."—*De Montfort T.* 2. 544.

[†] *Lamarck, Anim. sans vertebres.*

39



London Published by E. Donovan & Meſs.rs Simpkin & Marshall. April 1. 1823.

ORNITHOLOGY.

PLATE XXXIX.

GALBULA ALBIROSTRIS

WHITE BILLED JACAMAR.

ORDER

PICÆ.

GENERIC CHARACTER.

Bill straight, very long, quadrangular and acute or pointed: nostrils ovate at the base of the bill: tongue short, and pointed: thighs plumose in front: feet scansorial, having two toes forward and two behind.

SPECIFIC CHARACTER
AND
SYNONYMS.

Tail somewhat rounded: body green golden above, beneath ferruginous: chin with a triangular white spot: bill white, tip of the upper mandible black.

PLATE XXXIX.

Cauda subrotundata, corpore viridi-aureo subtus ferrugineo, gula macula trigona alba: rostro albo, apice mandibulæ superioris nigro.

GALBULA ALBIROSTRIS: cauda integra, corpore viridi-aureo subtus ferrugineo, gula macula trigona alba antice testacea, rostro albo. *Lath. Ind. Orn.* 245. *n.* 4.

WHITE BILLED JACAMAR. *Lath. Syn. Suppl. p.* 113.

Our readers will observe that in the present instance we follow the example of Dr. Latham in dividing the Galbula tribe from that of Alcedo. Linnæus, and subsequently Gmelin, had placed these genera together, under the term Alcedo, while most other authors have regarded them as distinct. The Galbulæ are the Jamacars of Buffon, and of Ray and Willughby, and also Klein, before the time of that French Naturalist. Brisson gave them the name of Galbula, which Latham, Illiger, and most other writers have of late adopted. The Galbulæ differ from the birds of the Alcedo tribe in having the bill generally longer; but the chief distinction consists in the form of the bill, which in Galbula is quadrangular, while in Alcedo the angles are three in number instead of four. In Alcedo the tongue is very short, flat, pointed and fleshy, in Galbula short and sharp pointed; and the feet of the Gabulæ are formed for climbing, having two toes placed forward and two behind, while in Alcedo they are gressorial, or having three toes forward and one behind.

The Jacamars constitute a tribe of birds distinguished for the rich metallic lustre of their plumage. The species are few in number and all, so far as we are acquainted with them, peculiar to South America, except the green Jacamar, which is found in Guinea. The species of this genus, the Galbula of Latham, are Viridis, Grandis, Paradisea and Albirostris, the last of which is the subject of our present consideration.

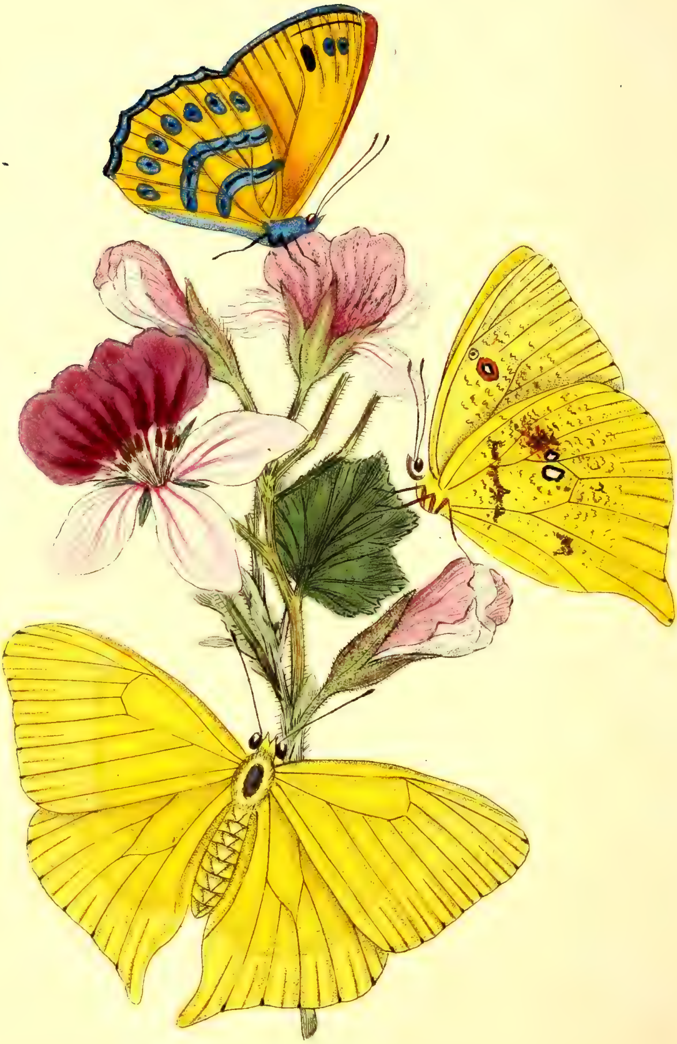
Galbula Albirostris is a bird of moderate size, with much the aspect of a king's-fisher. Its length is six inches and a half. The most conspicuous character of the species consists in the magnitude and colour of the bill, which is of great length and of a white colour, except the anterior part of the upper mandible, which is distinctly black to the tip.* The colour of the head, neck, back, wings and tail is a rich glossy green, changeable to brown, and glossed with a brassy or metallic lustre. The quill feathers and outer feathers of the tail brown. There is a small triangular spot of white extending from the eye towards the base of the bill: the chin is dark: the throat marked with a large triangular spot of white. Body beneath orange, darkest and inclining to chesnut on the breast; the legs pale yellowish.

---

* This does not accord with the description of the bird as it appears in Dr. Latham's Index Ornithologicus: that authority informs us the bill which is shorter than in the other birds of the same genus, is white with the base blackish. "Rostrum album, brevius quam in congeneribus, basi nigricans." In our bird, instead of the base, it is the tip or extreme half of the upper mandible that is black; and it is the same also in the example of the species preserved in the French Museum. This character is expressed in the figure of the bird by Vieillot, and is in particular pointed out in the general description by which that figure is accompanied: "les mandibles sont blanches, excepté le boute de la supérieure qui est noir."—*Hist. des Jacamars, p.* 4.

PLATE XXXIX.

This rare bird was probably unknown to Dr. Latham at the time he published his Synopsis of birds, as the description of the species first occurs in the Supplement to that work. It is there described from a specimen in the Museum of Dr. Hunter: and subsequently it appears in his Index Ornithologicus. There is besides this specimen of the Hunterian Collection, a specimen of the same species in the French National Museum, the figure of which has been published by Vieillot. He calls it *Venetou,* observing that it is so denominated in common with the other kinds of Jacamar, by the savages of Guiana, a country which this tribe of birds inhabit. Dr. Latham describes it as a native of South America, we apprehend it must be a scarce species: the specimen delineated is in our own collection.



London Published by E. Donovan & Meſs.rs Simpkin & Marshall. May 1. 1823.

ENTOMOLOGY.

PLATE XL.

FIGURE I, I.

PAPILIO CIPRIS

CIPRIS BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a club: wings erect when at rest. Fly by day.

** P. DANAI CANDIDI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings somewhat tailed, yellow with a series of black dots at the margin.

PLATE XL.

Papilio Cipris: alis subcaudatis flavis: margine nigro punctato.
Fabr. Ent. Syst. T. 3. *p.* 1. *p.* 212. 663.
Jon. fig. pict. 3. *t.* 39. *f.* 1.

The Entomologist will be aware that Papilio Cipris is one among the number of those very interesting species of the Papilio tribe which has been made known to the scientific world through the medium of the Fabrician writings, not having been previously noticed by any author, nor subsequently mentioned by any other except upon the authority of Fabricius. It will be also seen upon a reference to those writers by whom it is described, that there is no figure of the species extant, and that it is consequently known from description only; a circumstance that must render any delineation of it valuable that can be confided in. That reliance may be placed implicitly in the representation now before us: it is a faithful copy of the individual example depicted by Mr. Jones in his collection of drawings, from which the Fabrician description was taken, and to which his writings exclusively refer, and for this reason there can be no distrust as to its identity.*

This elegant Butterfly is of moderate size, and is most remarkable for the elongation of the posterior angle of the lower wings into a kind of tail. The superior surface of the wings are yellow, immaculate in the disk, but having along the margin of the anterior as well as the posterior wings, a series of black points or dots, as described in the Fabrician specific character. Those dots are nearly equidistant, a single dot appearing at the tip of each of the ribs where they terminate at the margin. The lower surface is more diversified, being pretty closely irrorated or sprinkled with dots of reddish, and two interrupted bands on the posterior pair. There is also a larger and a smaller contiguous silvery dot in the disk of each wing: the larger one on the anterior wing surrounded by a sanguineous circle or iris, the smaller and also two on the two upon the posterior wing environed with black. The same marginal series of black points which appear on the upper surface are also alike conspicuous beneath.

---

* Professor Gmelin has omitted to insert either *Papilio Cipris* or the other subject of our plate, Papilio Amalia, in his edition of Systema Naturæ: both have, however, been very properly added in the English Translation, by Dr. Turton, upon the authority of Fabricius.

FIGURE II.

PAPILIO AMALIA

AMALIA BUTTERFLY.

** NYMPHALES.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented; above fuscous, beneath yellow: posterior pair with two blue streaks, and a line of blue dots marked in the middle with black.

PLATE XL.

Papilio Amalia: alis dentatis supra fuscis subtus flavis: posticis strigis duabus punctisque cæruleis nigro notatis.
Fabr. Ent. Syst. T. 3. *p.* 1. 129. *n.* 398.

The gaiety of this most curious and interesting Butterfly can never fail to recommend it to the favourable attention of the amateur, nor its rarity to the Entomologist. The upper surface is of a purplish brown, changeable and glossed with a fulvous hue, and the posterior wings marked with a series of fuscous dots. The surface beneath is orange: near the extreme anterior angle are two contiguous blue spots, and a dark fuscous spot of larger size. Across the posterior wings are two bands of blue, and behind these a series of blue ovate spots; the abdomen and the margin of the wings are also blue. The middle of the blue bands across the disk is traversed by a somewhat interrupted line of black, while the blue spots have a black dot in the centre of each; and it is not unworthy of observation that the black central points in this series of blue spots upon the lower wings appear again upon the upper surface, forming the series of brown dots before described.

Papilio Amalia is a native of Sierra Leona. The drawing of this species in the collection of Mr. Jones was taken from a specimen in the cabinet of that celebrated collector Mr. Drury, as appears from the references of Mr. Jones, as well as those of Professor Fabricius. From the original manuscripts of Mr. Drury, now in our possession, it appears that all the species of this family of the Papilio tribe, without any exception, which his cabinet contained, had been collected at Sierra Leona by the intelligent traveller

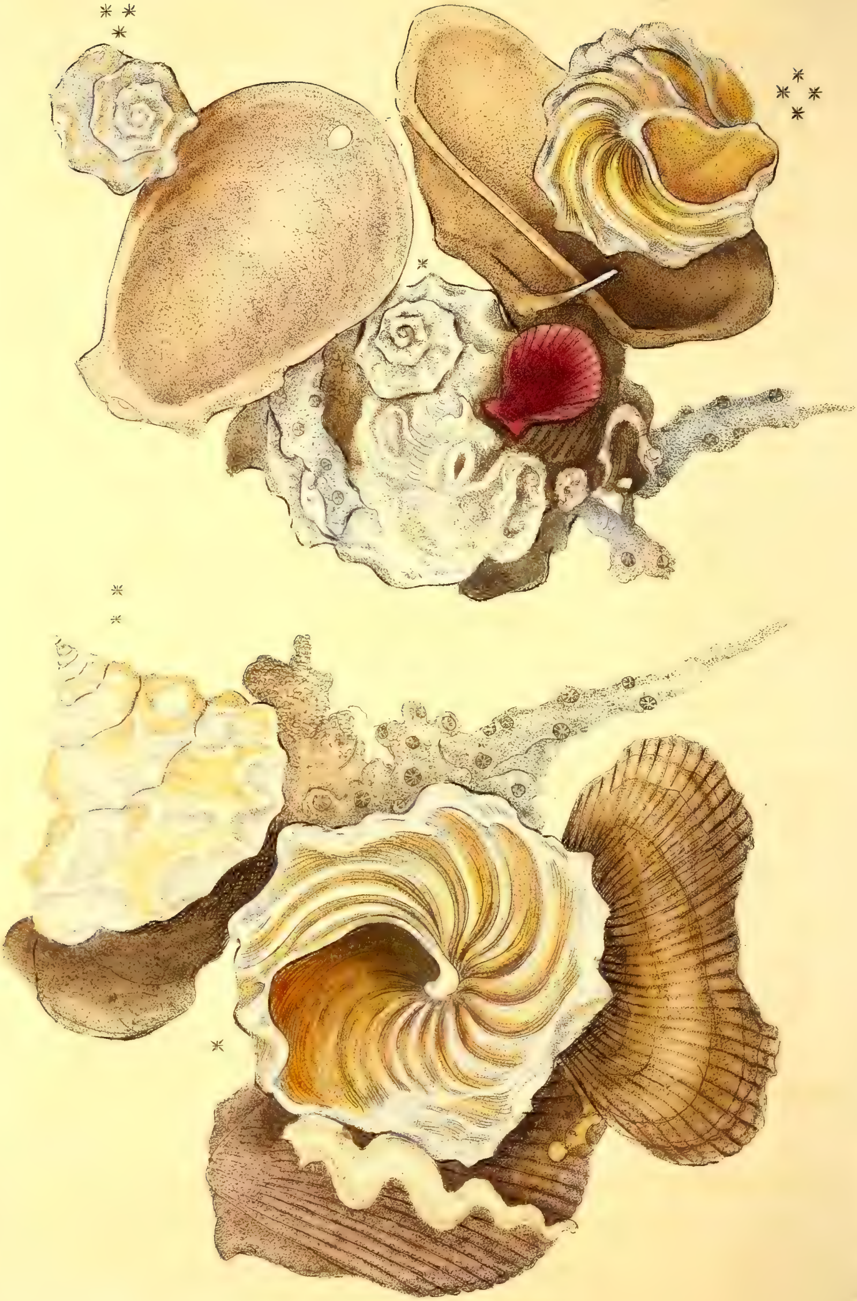
Mr. Smeethman, and consequently Papilio Amalia among the number. Mr. Smeethman, had spent many years in Africa and the West Indies, so that it is not exactly certain when he found those Papiliones, but on the authority of those manuscripts it may be added that Mr. Drury received them all in the year 1774, 1775 and 1776. *(MSS. Folio, Lepidoptera).*

The figure of Papilio Amalia, and Papilio Cipris are represented in the annexed plate upon a sprig of an elegant plant of the Linnæan genus Geranium, a variety of the

PELARGONIUM GRANDIFLORUM, OR GREAT-FLOWERED CRANE'S BILL,

an inhabitant of Southern Africa. Found by Mr. Fr. Masson at the Cape of Good Hope, and introduced into the Royal Gardens at Kew in the year 1794. A beautiful species, in blossom during most part of the summer.

41



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CONCHOLOGY.

PLATE XLI.

TROCHUS CONCHYLIOPHORUS

CARRIER TROCHUS.

UNIVALVE.

GENERIC CHARACTER.

Animal a limax. *Linn.* Shell univalve, spiral, more or less conic: aperture somewhat angular or rounded, the upper side transverse and contracted: pillar placed obliquely.

SPECIFIC CHARACTER
AND
SYNONYMS.

Whorls round and obsoletely plaited, the first brownish: aperture compressed, brownish: mouth and concave base brown.

TROCHUS CONCHYLIOPHORUS: spiræ anfractibus teretibus obsolete plicatis: anfractu primo aperturaque compressa subfuscis, fauce basique concava fuscis. *Gmel. Linn. Syst. Nat. T.* 1. *p.* 6. 3584. 110.

PLATE XLI.

Trochus Conchyliophorus. *Born. mus. t.* 12. *f.* 21. 22.

Trochus Lithophorus. *Mart. besch. Berl. naturf. t.* 12. *f.* 2. 3.

Phorus Agglutinans, le Frippier agglutinant. *De Montfort T.* 2. *p.* 139.

Trochus Agglutinans, Troque agglutinant. *Lamarck T.* 7. *p.* 14. *n.* 18.

Trochus Conchyliophorus is a native of South America, and is a shell of moderate size, seldom exceeding two inches and a half or three inches in diameter, and rising to the height of two inches or two inches and a half.

This shell when its growth is unimpeded by any adventitious adhesions, presents a form of usual symmetry, a trochus somewhat conic, or having a moderately elevated spire, with the whorls regular and well defined. The colour is white or yellowish, inclining to a lacteous hue: the base of the shell flattish and radiated with semicircular divergent rays of deep tawny, and the interior of the mouth or aperture of a tint somewhat similar. Such is the characteristic appearance of this shell when its growth has proceeded in an unobstructed manner; but, this is indeed a circumstance of rare occurrence, for nothing can exceed the sportive capriciousness with which, from necessity or design, or from some peculiar cause which we have yet to learn, the animal of this shell deforms its habitation by emburthening it with the spoils of other testaceous creatures. The appearance of this shell thus laden and encumbered is most extraordinary. With the first commencement of the labours of this animal in enlarging the capacity of its shell, it attaches to its external surface a variety of other shells, pebbles, corals, and similar extraneous bodies, generally such as have a convex surface, and which being impressed and partially imbedded in the soft substance of its shell, leave a deep concave impression in the surface when rubbed or broken off. Occasionally these impressions or cavities are numerous, and contribute much to deform the appearance of the shell. Those additional coatings, the remains of other bodies, can scarcely be considered ornamental, for they consist not of shells in a living state, or in a vigorous condition of colours and perfection: they are almost invariably the worn and tattered remnants, or broken valves of other testaceous bodies, without a shell of any brilliancy in the whole aggregation. It is in allusion to this circumstance that it has obtained among the French writers the significant appellation of *La Frippier*, or *Fripier*, and la *toupie frippiere*.* The disposition of these spoils of other bodies upon the shell of this Trochus is as capricious as the choice of them seems accidental, for these are sometimes sparingly applied, and at others more profusely: the mass which we have represented in the annexed plate will convey an adequate idea of an example of this shell very heavily laden, one in which the shell itself, although it has to sustain and move beneath its burden, is far from being very conspicuous in the mass; the adhesions in the aggregate much exceeding it in magnitude. It will be observed that it is only upon the superior surface and along the basal margin of the shell that those adventitious remains are attached, the base being unencumbered, so that the animal can move with the burden of his loaded mansion without impediment. It is said that this extraneous covering consists either of shell, corals, gravel, pebbles, and whatever other substances happen to lie upon the ground at the bottom of the waters it inhabits, and this is very probable: we have seen a shell of this kind elegantly inlaid with rounded black pebbles, and thus producing a contrast with the pale tints of the shell itself of very pleasing aspect.

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* Also la Maçonne, la Conchyliologie—in German *die Trodlerin, Conchylien stræger*—among the Hollanders *draagende tol. &c.*

As we cannot conceive that a propensity so singular as these animals display, not in the instance of a solitary example, but throughout the whole species, can exist without some imperious or impulsive cause, we are inclined to imagine that those labours of the animal are intended for their own protection. Probably they may be the favourite prey of some voracious fishes, and that these shells are studded purposely with such extraneous bodies, either with the design of adding to their strength, for the depth of the impressions indicate a soft and tender texture, or that beneath this covering, as in ambush, it may lie the more effectually concealed from foes. When the aggregation is considerable, its own shell may be sometimes passed over unobserved among the heterogeneous mass of broken shells and pebbles imbedded in its shell, or agglutinated in its surface Upon the whole we are induced to consider these labours of the animal as intended for the preservation of the species against its enemies, and one of the most singular with which the science of Natural History is at this time acquainted.

This shell, which has borne several names in the different European languages, in allusion to this characteristic circumstance, has been proposed by Denys de Montfort as a new genus, under the name of Phorus. The character of the Phorus genus consists in the shell being liberated, or detached, univalve, with the spire regular and flat; base umbilicate: the umbilicus sometimes obliterated by age: mouth entire, very open, with acute margin: carina acute. Shell tiled, or covered with extraneous matter agglutinated to its surface. This genus is adverted to by the French writers, but is not adopted by them. Lamarck retains the species among the Trochi, as it stood before in the Linnæan Systema Naturæ, but with another change of nomenclature, being denominated by that author Trochus Agglutinans.

That portion of the group or mass which is placed in the upper part of our plate exhibits the pyramid or spire of the carrier shell which is encumbered with the adhesions. It is much depressed, flattened and deformed by these extraneous fragments. The single * denotes this shell.

In the group disposed in the lower part of the plate the single * denotes the principal carrier shell. It is the base of the shell that becomes obvious in this mass, and which, as before described, is free from any adhesions, these being situated upon the pyramidal sides and margin of the shell, but none adhering to the base.

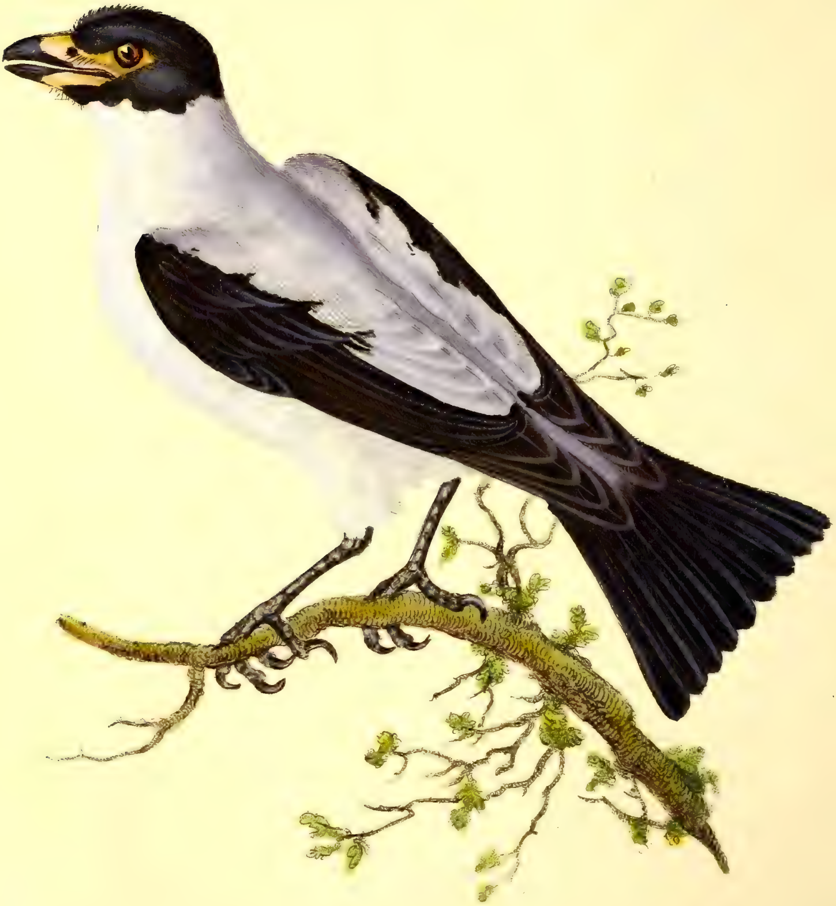
There is one figure in the lower group distinguished by two ⁑ in which the true form of the shell is shewn as it appears when the adhesions have not impeded the growth and elevation of the spire.

The shell marked with three *⁎* is of smaller growth, more depressed and angulated from some accidental cause.

PLATE XLI.

A shell of unimpeded growth is shewn at *⁑* in which the true form of the base and aperture, or mouth of the shell, are more clearly exemplified. The base is most commonly, and the interior of the mouth, with the lip, invariably, of a dark testaceous brown, while the pyramid of the shell is pale.

42



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ORNITHOLOGY.

PLATE XLII.

LANIUS CAYANUS

CAYENNE SHRIKE.

ACCIPITRES.

GENERIC CHARACTER.

Bill rather straight with a tooth on each mandible near the end: base naked: tongue jagged at the end.

SPECIFIC CHARACTER

AND

SYNONYMS.

Cinereous: head, quill feathers and tail black: bill black at the tip.

LANIUS CAYANUS: cinereus, capite remigibus rectricibusque nigris, rostro apice nigro.

PLATE XLII.

LANIUS CAYANUS: cinereus, capite remigibus rectricibusque primoribus nigris.—*Linn. Syst. Nat.* 1. 137. 20.—*Gmel. T.* 1. 304. 20.—*Lath. Ind. Orn.* 1. 80. *n.* 47.

Becarde. *Buff.* 1. *p.* 311.
Le Pie-griesche grise de Cayenne.—*Pl. Enl.* 304.
Psaris. *Cuvier An. Regne T.* 1. *p.* 340.
Tityra Cinerea, Becarde. *Vieillot Ornithologie Elementaire, p.* 39. *n.* 118.
CAYENNE SHRIKE. *Lath. Syn.* 1. *p.* 189. 41.

Lanius Cayanus is a bird of very striking aspect, although its colours are of the most simple kind, and much more closely resembling those of the feathered race peculiar to the northern regions of the European continent than to the fervid climates of South America, which it naturally inhabits. The length of this bird is about eight inches, the prevailing colour of the plumage, above grey, beneath whiter, and sometimes pure white: head wings and tail black: the bill pale from the base beyond the middle, with the tip black: the legs and claws blackish. There are two or more varieties of this bird, in which some variation of plumage is exemplified. This bird has all the manners of our Common Grey Shrike, Lanius Excubitor, and being found at Cayenne, has obtained the English appellation of the Cayenne Shrike.

This is a Linnæan species of the Lanius genus, and if we allow ourselves to be governed by the Linnæan definition, there can be no hesitation in referring it to that genus. Indeed its characters are so conformable with that genus that no English writer has conceived the propriety of separating it from them; and it has been described by Pennant, Latham, Shaw, and some others. The French writers are of a different opinion: they divide the Lanii into several families, and this is one among the number of those separated from the Lanius genus. This separation has been induced chiefly from the structure of the bill. It must be admitted that a slight dissimilarity does prevail in the form of the bill in this bird from that of others of its tribe: it is larger and more swollen in its shape than usual in the Shrike family, but we are not sufficiently impressed with its generical dissimilaritybeing so considerable as to demand its separation from the Lanius genus.

It should be observed that Buffon, contrary to the example of Linnæus, divided the Lanius or Shrike tribe into families, and that he separated the species now before us, with one or two others, into a particular group, which he called *Becarde*, a name implying the greater magnitude of the bill in this group, in comparison with that of the other Lanii from which he divided them. It is to this separation of the Shrike tribe, by the French Naturalist Buffon, that the observations of Cuvier refer, when in speaking of his new genus *Psaris*[*] he tells us, that Buffon has extended, *mal a propos*, the name of Becarde to a *Tyran* (Tyranus[†]) and to a Piegrièche or Shrike, nearly allied to the *Merles* (Turdus *Linn.*[‡]) Psaris is the Greek name of a bird described among the ancients, which the moderns have not hitherto determined, and which Cuvier assigns to this newly constructed genus, of which our Lanius Cayanus is the type.

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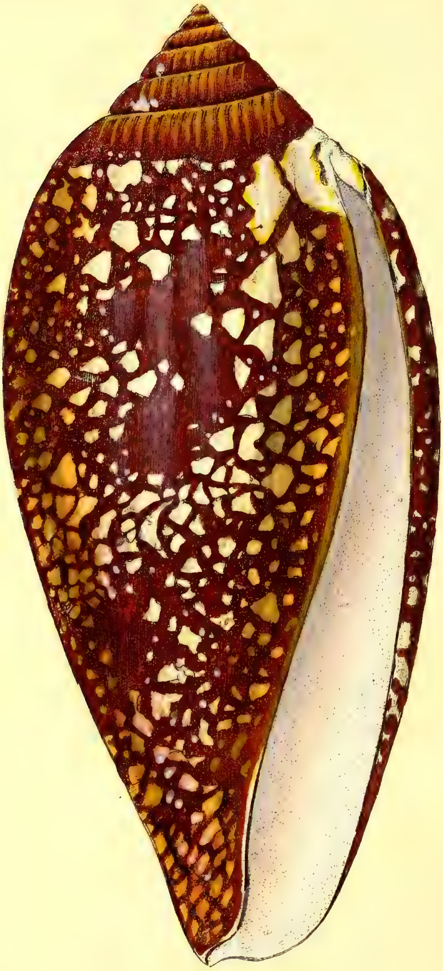
[*] *Psaris.* "Ont le bec conique, trés gros, et rond à sa base, mais n'échancrant point le front; sa pointe est légèrement comprimeé et crochue." *T.* 1. *p.* 341. *Reg. Animal.*

[†] Lanius sulfuratus.

[‡] Lanius barbarus.

The present subject is to be considered, therefore, as the appropriate example of the generical distinction of the genus *Psaris,* and it is besides this, the type of another genus established lately among the continental Naturalists, namely the TITYRA of Vieillot, for the genus Psaris, proposed by Cuvier, is not adopted. This last-mentioned writer (Vieillot) assembled together, under the name of *Becarde,* several species, of which the type, the Lanius Cayanus of Linnæus, is now before us. The generical distinction is the following : bill round and glabrous at the base, robust, strait, rather depressed, convex above and beneath ; upper mandible notched, and slightly incurvate near the tip ; the lower one notched, turning up and acute at the tip : nostrils oval, tongue large, short, lacerated at the end : mouth ample and ciliated : first and second quill feathers longer : toes four, three being placed before and one behind.

43



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CONCHOLOGY.

PLATE XLIII.

CONUS AULICUS

CHAIN-SPOTTED BRUNETTE CONE.

ORDER

UNIVALVE.

GENERIC CHARACTER.

Animal a limax. Shell univalve, convolute, turbinate: aperture effuse, longitudinal, linear, without teeth, entire at the base; pillar smooth. *Linn.*

** Cylindrical.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell reticulated with veins and interrupted longitudinal bands: spots white and sub-triangular.

PLATE XLIII.

CONUS AULICUS: testa venis reticulatis fasciisque longitudinalibus fuscis interruptis. *Linn. Mus. Lud.*
Ulr. 562. *n.* 174.
Gmel. Linn. Syst. Nat. t. 1. *p.* 6. 3394. 60.
Bonann recr. et mus. Kirch. 3 *f.* 133.
Volute pennata, &c. *Rumpf. mus. t.* 33. *f.* 3. 4.
Volute aurantia elegans, &c. *Seba Mus.* 3 *t.* 43 *f.* 1.—5 *et t.* 47. *f.* 10—12.
Olear. Mus. t. 31. *f.* 4. 5.
La Brunette *Favann. Conch.* 2. *t.* 18. *f.* 6. *c.* 7.

Conus aulicus, the Spotted Brunette Cone, is one among the number of those widely-diffused species of the testaceous tribe that occur in the seas of both the Indies, being equally common in the American as the eastern seas, and inhabiting also most of those in the warmer parts of Asia.

In a species so extensively disseminated, we cannot fail to meet with many variations which mark, in a peculiar manner, the effect of climate upon the productions of creation. Those of the American seas are usually small, or not exceedingly a very moderate size, and scarcely, for this reason, ever deserve the estimation of the Conchologist. The Indian ocean is productive of these shells in greater beauty and perfection, but of all its numerous varieties there appears to be none which in these particulars, as well as magnitude, excel the fine examples that occur in the Amboyna Sea. It is a specimen of this kind that we have selected as an illustration of the species, the most choice and perfect specimen of the late Leverian Museum.

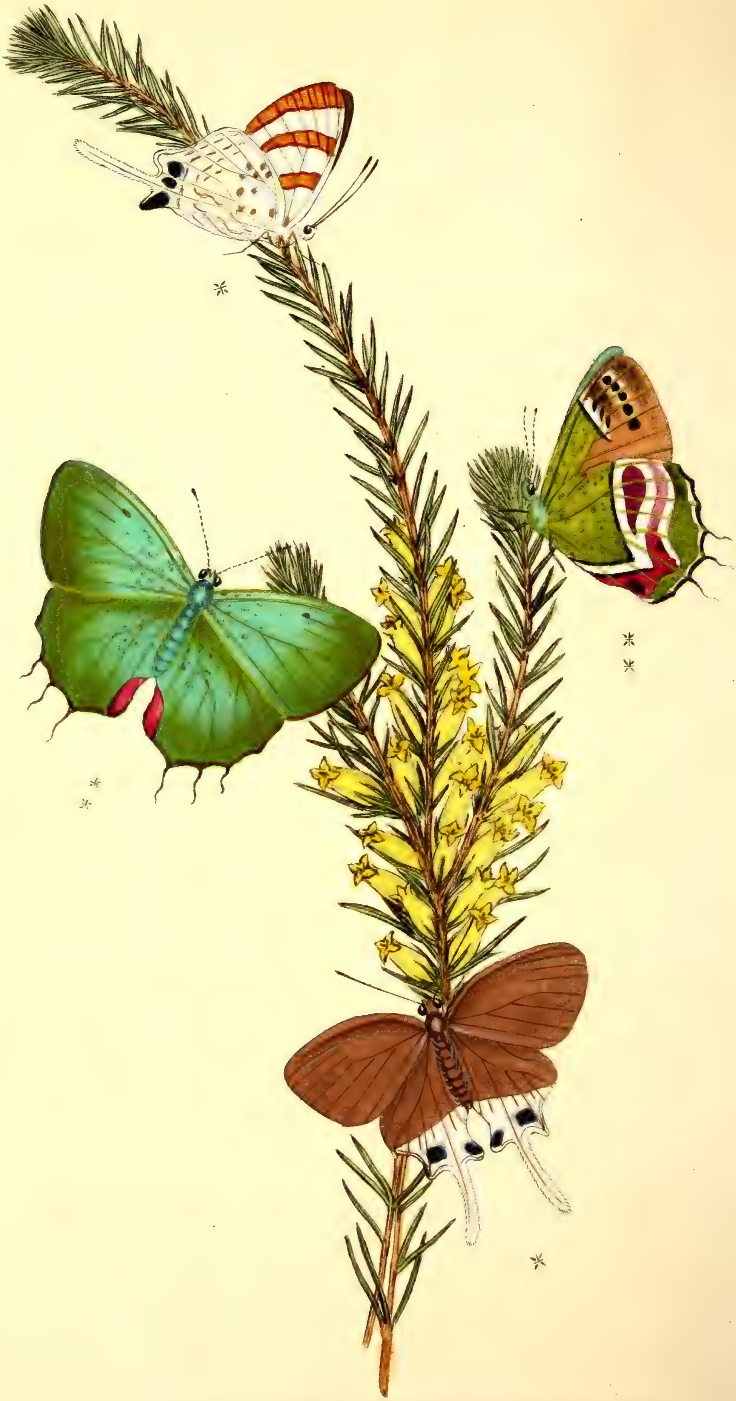
The length of these shells very rarely exceeds three, or at the utmost four inches; the present shell is rather more than five inches in length, and its breadth across the most inflated part of the middle no less than two inches and a quarter.

It is not to be denied that the Linnæan definition of the Conus tribe is far too comprehensive. It embraces shells so remote from each other in their general form, and indeed in most particulars, that we can scarcely be surprised to observe a disposition in later writers to amend his distribution, whether under the form of different families or as new and independent genera. This was requisite, though not in our mind to the extent these writers have proceeded: Bruguiere and Lamarck, following the example of Favanne and others of their predecessors, in their early works divided the Conus genus into three sections, the first having a coronated spire, the second a spire of a conic shape and not coronated, and the third the spire cylindrical and not coronated; distinctions not dissimilar from those before known among the French naturalists under the appellation of *Cornets*, *Pyramids*, *Rouleaux*, and *Cylinders*, the tribes into which they had previously distributed the Linnæan Cones, nor very different from the characters which Linnæus had himself proposed for the subdivisions or sections of his Conus genus. In the later writings of the French authors, as Bosc, Lamarck, and Denys de Montfort, these distinctions being multiplied, the Cones constitute several new genera. De Montfort forms a distinct genus of the particular family of Cones, to which our present species belongs, the type of which is his *Cylindre drap d'or*, Cylindre textile, the Conus textile of Linnæus. The shells of this genus, according to the definition of the author, consists in its form being cylindrical, as in the olive, Conus Oliva of Linnæus, and most inflated or swollen across the middle; in the olive, the margin of the lip is straight, and the edge acute, while in the cylinder, instead of being straight, there is a slight inflection of the lip inwards, about the middle of the shell; the spire is conical, as in the olive, so that the mouth, though long, does not extend throughout the whole length of the shell as they do very nearly in the cornets: and the mouth becomes more open in descending from the spire towards the base: the pillar lip is also distinguished by having a long fold or plait at the base: neither in this the cylinder, nor in the Rollus genus, to which it is closely allied, has De Montfort been followed by other authors, we have however been induced to repeat his character, because, although we should not adopt it, as it now stands, we may consider it entitled to some consideration.

The skilful conchologist must be perfectly well aware that the two species of the Cone tribe to which we have just adverted, the Conus aulicus and textile, are nearly analogous, and that their varieties so closely approximate and intermingle with each other as sometimes to afford no very certain means to the less experienced naturalist of distinguishing one species from the other. This difficulty of drawing a line of definition between the species was confessed by Linnæus, and has been acknowledged by later naturalists: Gmelin himself has expressed a doubt whether they may not be the same. To obviate this difficulty, the continental amateurs have been accustomed to divide the shells of this kind into several families or sections, distinguishing each according to the particular pattern or figure of their colours, spots, and lines, and hence arise the various appellations of *La Brunette*, *Brunette perlée*, and *l'omaria*, assigned by them to different varieties of the Conus aulicus; and *le drap d'or*, *le drap d'or orange*, *le drap d'or orange rayé*, and their correspondent names in other European languages to the varieties of Conus textile. Several distinct varieties of both species are described under these denominations by Favanne, and others are again enumerated by Martini and other writers. As a general distinction of these two analogous shells, it may not be amiss to add, as the result of our own observation, that in Conus aulicus the ground colour is always brown, with the spots of a white or whitish colour, more or less numerous, and so disposed in catenated or chain-like reticulations as to leave at intervals large subangular spaces or patches of the brown colour, void of any spots or dots of white. In speaking of Conus textile, we should be inclined, on the contrary, to term the ground colour white or whitish, that colour prevailing most abundantly in its general aspect, and the reticulations being brown or tawny; these reticulations consisting for the most part of fine lines and waves very numerous and interwoven with each other; and lastly it may be observed, that Conus aulicus is rather more of a slender form than Conus textile. With due attention to these particulars we rest persuaded the two species, under all their various aspects, may be discriminated.

Dead shells of the species aulicus are not unfrequently found upon the shores of the seas which it inhabits. In the living state they are said to reside constantly at the depth of about five or six fathoms below the surface of the water. The animals of the cones have the head furnished with two feelers, or tentacula, near the points of which the eyes are situated, one on each feeler.

44



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ENTOMOLOGY.

PLATE XLIV.

FIGURE I.*

HESPERIA PHOCIDES

PHOCIDES BUTTERFLY.

Order

Lepidoptera.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a kind of club: wings erect when at rest. Fly by day. *Papilio.*

** Papilio Pleb. rurales. *Linn.*

Hesperia. Feelers compressed and hairy at the base; the tip cylindrical and naked; club of the antennæ oblong and often hooked. *Fabr.*

* Hesperia rurales. *Fab.*

PLATE XLIV.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings tailed, above fuscous: lower ones white at the tip, with two black dots.

Hesperia Phocides: alis caudatis supra fuscis posticis albis: punctis duobus nigris. *Fabr. Ent. Syst. t. 3. p.* 1. 282. 85.

Hesperia Phocides is an insect of most remarkable appearance, the upper surface being no less distinguished for its singularity than the lower one for its delicacy and beauty. It is one of that particular kind of Papiliones that are furnished with tails; of these it has two, and those from their magnitude not inconspicuous. Above the anterior wings are brown, and half the posterior pair are of the same colour, but the lower half, together with the tails, are white, and towards the posterior margin marked with two black spots.

The under surface of this butterfly is of a delicate white colour; the anterior pair marked with three orange bands, the posterior ones with several interrupted fine lines of orange, and a few dots of the same colour, the end of the wing marked with three black spots.

This rare butterfly is a native of Africa, and has not been before delineated in the work of any author. It is one of the Fabrician species described from the cabinet of the late Sir Joseph Banks; our figure is copied from the specimen which Fabricius described.

ENTOMOLOGY.

FIGURE II.

HESPERIA GABRIELIS

GABRIEL BUTTERFLY.

** Papilio Pleb. rurales. *Linn.*

* Hesperia rurales. *Fabr.*

SPECIFIC CHARACTER AND SYNONYMS.

Wings somewhat three-tailed, glossy blue green: lower ones beneath brown, with white bands before the tip.

HESPERIA GABRIELIS: alis subtricaudatis cæruleis nitidissimus; posticis subtus fuscis ante apicem albo fasciatis. *Fabr. Ent. Syst. T. 3. p. 1. p. 262. s. 14.*

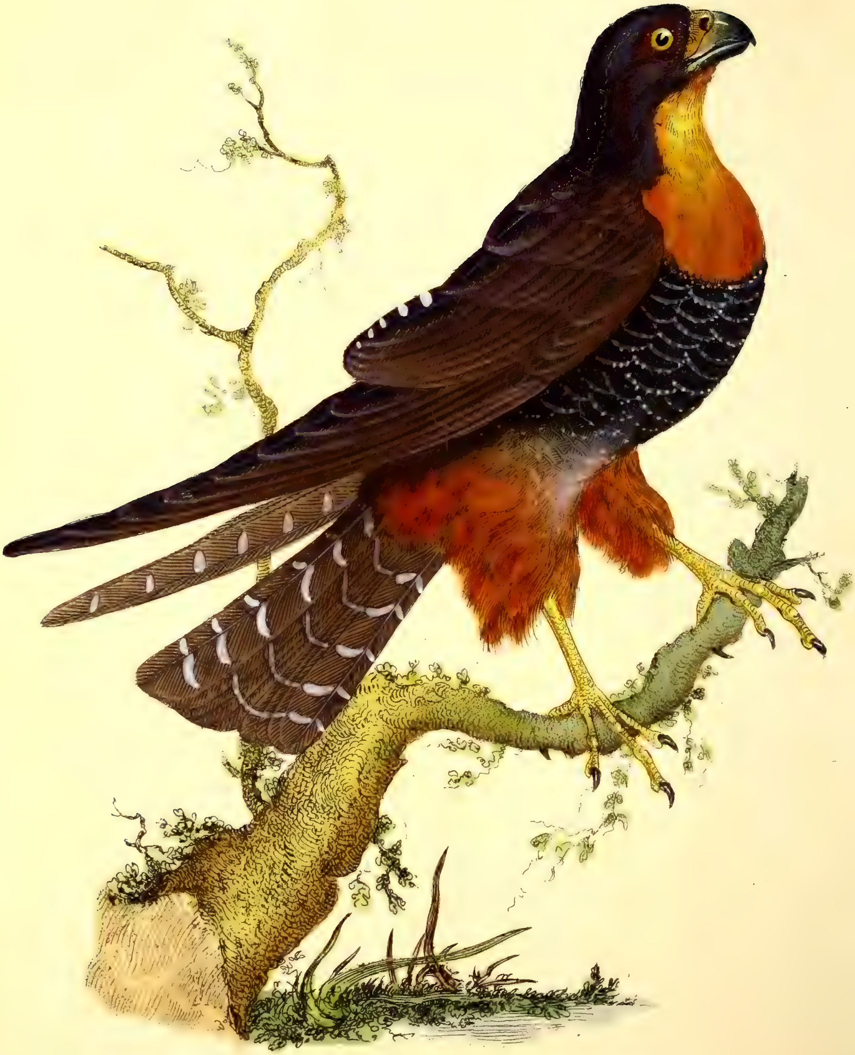
The insect, destined by entomologists to commemorate the name of Gabriel, is one of very unusual splendour; it might be indeed difficult for the imagination to conceive an object of surpassing beauty. The upper surface is of a rich blue green, changeable to green and golden; the posterior margin of the wing has three short and slender filament-like tails, and the anal angle is marked with a deep crimson spot. The under surface is very different from the upper; the prevailing colour is green, except at the anterior half of the first pair, which is brown. There is a narrow white stripe, and a series of five black spots on the anterior pair; across the posterior ones a broad and somewhat angular bicolorate band, the ground colour being white, with a flexuous crimson stripe and marginal line, and an intermediate lentiform spot of the same colour.

This insect is no less rare than beautiful, and is a native of South America. The figure of the upper and lower surface, as well as those of Papilio Phocides, are displayed in the annexed plate upon a sprig of

ERICA TETRAGONA, SQUARE-FLOWERED HEATH,

a native of the cape, from whence it was introduced into England in the year 1789, by Mr. F. Masson.

45



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ORNITHOLOGY.

PLATE XLV.

FALCO THORACICUS

LONG-WINGED ORANGE-BREASTED HOBBY.

Accipitres.

GENERIC CHARACTER.

Bill hooked, the base covered with a cere: head covered with close set feathers: tongue bifid.

* Legs naked.

SPECIFIC CHARACTER.

Wings somewhat elongated: bill and legs yellow: body blackish: back immaculate, tail barred with interrupted whitish lines: throat and breast fulvous: thighs and vent rufous.

Falco Thoracicus: alis subelongatis: rostro pedibusque flavis: corpore nigricante: dorso immaculato, cauda fasciis albicantibus interruptis, jugulo pectoreque fulvo, femoribus crissoque rufis.

PLATE XLV.

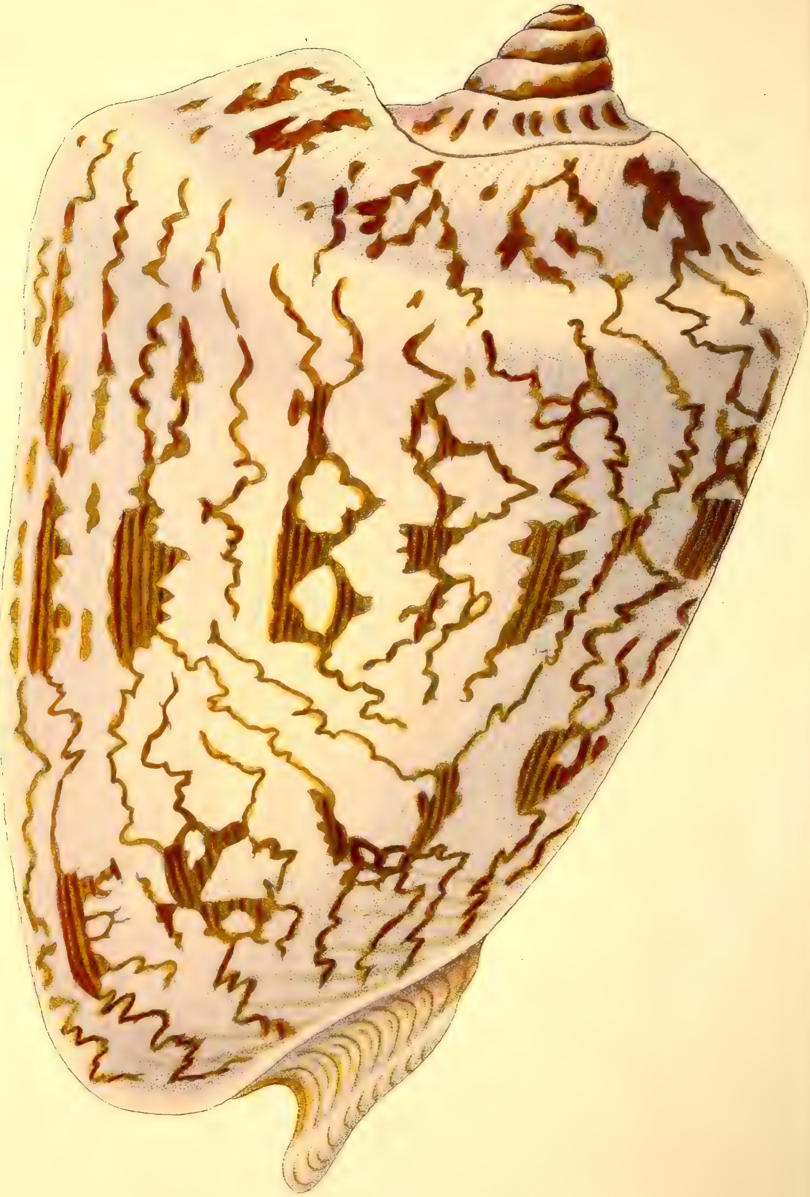
This very striking species of the Falco tribe originally constituted part of the ornithological collection of Mr. Reddel, and was first recognized as a nondescript bird by Professor Temminck, of Amsterdam, when in London in the summer of the year 1819; at the same time that he pronounced it an undescribed species, he assigned it the trivial name of thoracicus, and we have since understood it is so designated in his MSS. This bird, with many other new species from that extensive museum, is at the present period in our own possession; we have compared it with those of the Falco tribe already noticed by writers, and have no reason to distrust the accuracy of Mr. Temminck's conclusions. The bird appears to be distinct, and as the trivial name of thoracicus, which Mr. Temminck has given to it, is sufficiently expressive of its character, there cannot be the least objection to retain it: it should be added, that we are totally unaware of any character this author may intend assigning to this species, that by which we have distinguished it is the result of our own observation.

The nearest approximation to this new species is the Orange-breasted Hobby of Latham's Synopsis, Falco aurantius of his Index Ornithologicus, a bird described by that writer from specimens in the British Museum that exists no longer, and in the Leverian Museum long since dispersed; but the accuracy of his description leave little doubt of the bird before us being distinct. There is a similarity, at the same time that upon due comparison the difference will be found material. The orange-breasted Hobby is fifteen inches long, our Falco thoracicus not more than nine inches; the wings in the former short, and reaching only to the middle of the tail, while in our bird the wings extend nearly an inch beyond the end of the tail: the back in our bird is uniformly dark and immaculate, in Falco aurantius it is crossed by whitish lines; in F. thoracicus the tail is marked with five equidistant bars of white, the most remote of which towards the tip, is no greater distance from it than the bands are from each other: in F. aurantius the tail is crossed by narrow bars of white, but only from the base as far down as the middle. The legs in our bird are yellow, and the claws short: in F. aurantius the legs are lead-coloured, they resemble those of the Sparrow-Hawk, but are more long and slender, and have the toes and claws longer in proportion.

Dr. Latham has subsequently described two supposed varieties of this species in his Synopsis, and in his Index Ornithologicus; both these accord very nearly in size with our bird, while, however, in some particulars, they are more remote from it than that first mentioned. The first of these β is ten inches long, the streaks across the back not very conspicuous, the chin white, and the throat orange; in the other, γ, the upper parts are brown barred with blueish: the lower belly, with the thighs and vent rufous, and the legs orange.

Whether the two last-mentioned birds ought really to be considered as varieties of the first, or as specifically distinct, may possibly admit of some doubt; if varieties, they may be perhaps considered as the younger birds that have not yet attained the full plumage of the adult, and this may seem to be in some degree confirmed by their habitats, being all inhabitants of South America; the first of Surinam, the two last of Cayenne. There is, as before observed, a general resemblance between these presumed varieties and our present bird, but the differences we have pointed out appear to us sufficiently decisive of its distinctness as a species, notwithstanding its similitude.

46



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CONCHOLOGY.

PLATE XLVI.

VOLUTA SCAPHA.

GREAT RETICULATED BOAT,

OR

NOBLE VOLUTE,

UNIVALVE.

GENERIC CHARACTER.

Animal a limax. Shell unilocular, spiral; aperture without a beak, and sub-effusive: pillar twisted, or plaited: generally without lips or perforation.

** Ventricose, spire papillary at the tip, or terminating in an obtuse rounded eminence.

SPECIFIC CHARACTER
AND
SYNONYMS.

Shell thick, heavy, smooth, clouded with ziczac brown lines, pillar four plaited, lip subulate.

PLATE XLVI.

VOLUTA SCAPHA: testa crassa, ponderosa, laevi, nebulosa, lineis angularibus fuscis: columella quadruplicata, labro subulato.

VOLUTA SCAPHA: testa rudi nebulosa: lineis angularibus fuscis columella cærulescente quadruplicata, labro subulato. *Gmel. Linn. Syst. Nat. T.* 1. *p.* 6. 3468. 121.

VOLUTA SCAPHA: testâ turbinato-ventricosâ, crassâ, ponderosâ, albidâ, lineis longitudinalibus angulato-flexuosis rufis vel spadiceis undatâ; ultimo anfractu anterius obtuse angulato; labro subulato; columella quadruplicata. *Lamarck. T.* 7. 334. 13. *Encyclop. pl.* 391. *Fig. a. b.*

VOLUTA SCAPHA, *Ann. ibid n.* 12.

VOLUTE PIED-DE-BICHE. *Lamarck.*

In an early part of the present work, our readers were presented with a figure and description of the Chinese variety of this noble volute. The present shell, which is considerably larger, and in some few respects rather different, is also found in the seas of China, but is nevertheless occasionally distinguished from the former kind by the trivial appellation of *capensis*, or the cape variety of the noble volute, because it is rather more frequently, or at least more easily, obtained from the Cape of Good Hope than from China.

The difference in the appearance of these two shells consists as well in the size as in the dissimilarity of the spots and lineations. At the first glance, or to the eye of inexperience, they may really appear so very different as to be readily admitted as two species distinct from each other. Those, however, who are accustomed to observe the varied aspect of shells in the progressive periods of their growth from the smaller to the larger size, and also to observe the peculiar influence of different localities and climates upon testaceous bodies generally, will be aware of certain deviations that may arise from these material causes in the species now before us; and, if happily they possess the rare advantage of being able to consult a regular series of several individual shells differing in these particulars they will be under little difficulty in perceiving the relative alliance of the several varieties to the same individual species.* At the commencement of this undertaking, we had ourselves ventured, notwithstanding some very respectable opinions to the contrary, to offer the Chinese Volute (Volute nobilis of Solander) as a variety of Voluta Scapha, rather than as a different species; and it is with some satisfaction we observe, that the accuracy of this conclusion has been subsequently sanctioned by the additional authority of Lamarck, whose work appeared a few months after our own remarks had been promulgated.—Without therefore presuming to enter into any future elucidation of this interesting shell, we believe it may be safely presumed that the revival of the subject, in the present instance, will not be deemed superfluous; or that the figure of the fine adult shell, which is now presented to the consideration of the reader can possibly prove unacceptable, either as a distinct variety, or in elucidation of the species of the former shell. It is the largest, and the most magnificent example of the full-grown shell we have met with in the course of our collecting, and indisputably the type of the species Scapha to which we adverted in our former description of Voluta nobilis, (pl. 4.)

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* A variety has been found upon the Coasts of Java, of a rose or pale flesh colour, varied with waved lines and spots of red brown, and another kind at the Philippine Islands.

This choice example of the species, which we have selected for our delineation, once held a conspicuous station among the other conchological rarities of the Leverian Museum, and realized by sale at the public hammer the sum of eight guineas. Nor has the species diminished in value from that period, for it still remains very scarce, and when fine, never fails to produce a price of equal, if not more consideration. In the ordinary routine of business, between collectors and those who furnish rarities for the conchological cabinets, the usual charge of a shell of this kind, in superb condition, can be scarcely estimated at less than twenty guineas.

The length of our present shell is almost six inches and a half, its greatest breadth four inches; the colour delicate yellowish, changeable in the shadows to a faint greyish purple, and all the lines and spots of a lively brown. In respect to size, it exceeds the celebrated example of Seba, which once formed a part of the Dutch Museum, and was sent to Paris by the French, when they invaded Holland, during the revolution; neither does it yield in elegance and perfection to that shell, the rarity of which, as well as beauty, is so pointedly described by that able Naturalist: "Cymbium exhibetur perquam rarum, ex flavo et fusco elegantissime in modum marmoris, variegatum. Papilla nitidissima nativam papillæ uberis muliebris formam exprimit, coronaque ambitur radiata."* *Seba* 3. *t.* 64. *f.* 5, 6.

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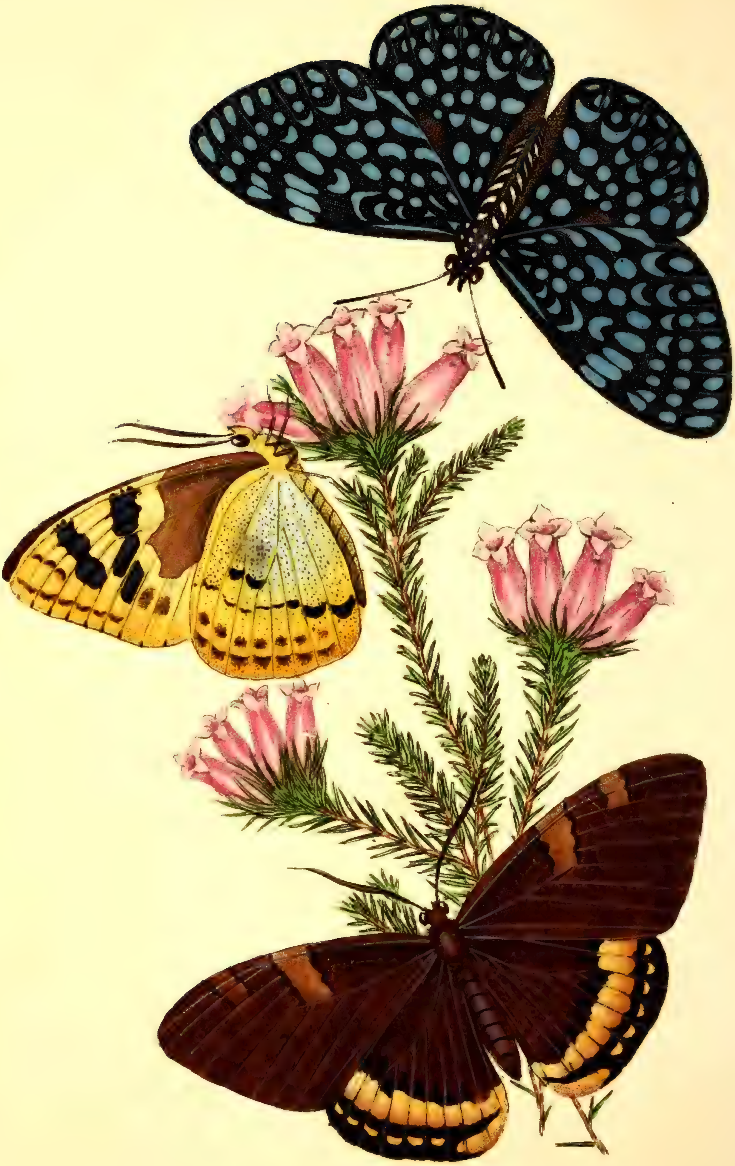
* The papilla or teat which is here mentioned by Seba, is the rounded spire of the shell which always bears that appearance: and the radiation by which it is encircled, the dark fuscous streaks which traverse the lower whorl or whorls of the spire, and which, when the shell is held in one position seem to diverge from the teat as a radiation from a center.

47



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ENTOMOLOGY.

PLATE XLVII.

FIGURE I. I.

PAPILIO PHALARIS

PHALARIS BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a club: wings erect when at rest. Fly by day.

*** P. DAN. FESTIVA.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, fuscous: posterior wings with two streaks of testaceous spots.

PLATE XLVII.

Papilio Phalaris: alis integerrimis fuscis: posticis strigis duabus macularibus testaceis.

Papilio Phalaris: alis integerrimis fuscis: posticis strigis duabus macularibus albis. *Fab. Ent. Syst. T.* 3. *p.* 1. 45. 138.—*Jon. fig. pict.* 3 *tab.* 75. *fig.* 2.

This very choice and truly interesting insect is one among the number of those rarities of the Papilio tribe which has been made known to the scientific world, through the entomological writings of Fabricius, but of which no figure is extant in the works of any author: it is from the description only that the species can be at present known, and it is for this reason, with no small degree of pleasure we are enabled to add upon this occasion, as in many former instances, that the identity of the species has been determined upon the same authority as that to which Fabricius was himself indebted for his description of the insect. The delineations in the annexed plate are faithful copies from the original drawings of Mr. Jones, which Fabricius has described, and to which his works refer; and we rest persuaded, that this circumstance alone need be only mentioned to ensure the attention they so justly merit in the mind of every enlightened naturalist.

The painting to which Professor Fabricius refers for the figure of Papilio Phalaris, in the collection of Mr. Jones, is the second figure, tab. 75, of the third volume. Those figures, for it is both the upper and the lower surface that are delineated, are copied from a specimen in the cabinet of Mr. Jones: its habitat was then unknown, and it is with regret we must allow, that it is not in our power even now to supply the deficiency. We recollect having seen an example of the same, or a very similar species many years ago, among a parcel of insects collected in the interior of Africa, about four hundred miles above Sierra Leona, and we have been inclined to believe upon this recollection that it may possibly be a native of that region of the globe.

The antennæ of this insect is somewhat fusiform like that of certain families of the Linnæn Sphinges being thickest from the middle towards the end, and terminating in a setaceous point, a circumstance noticed by Fabricius in the words "*Antennæ clava elongata, acuta.*" His description of this species is rather too concise and can scarcely fail to derive some material elucidation from the figures now submitted.

FIGURE II.

PAPILIO ARETHUSUS

ARETHUSUS BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a club: wings erect when at rest. Fly by day.

*** P. DAN. FESTIVA.

PLATE XLVII.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings entire, deep black with blue spots: posterior pair beneath with sanguineous dots.

Papilio Arethusus: alis integerrimis atris cæruleo maculatis: posticis subtus punctis sanguineis. *Fabr. Ent. Syst. T.* 3. *p.* 1. 43. *n.* 130.

Papilio Arethusa *Cram. pap.* 7. *tab.* 77. *fig. E. F.*

A native of Africa, and one of the most remarkable of its tribe. The upper surface of this insect is a deep black, very closely studded with spots of cærulean blue, disposed in pretty regular transverse streaks, and producing altogether an appearance singularly picturesque and of very unusual beauty. Beneath, its aspect is less peculiar, the colour is black, the anterior wings immaculate, the posterior ones spotted at the base and tip with scarlet. This, like the former, is an insect of considerable scarcity.

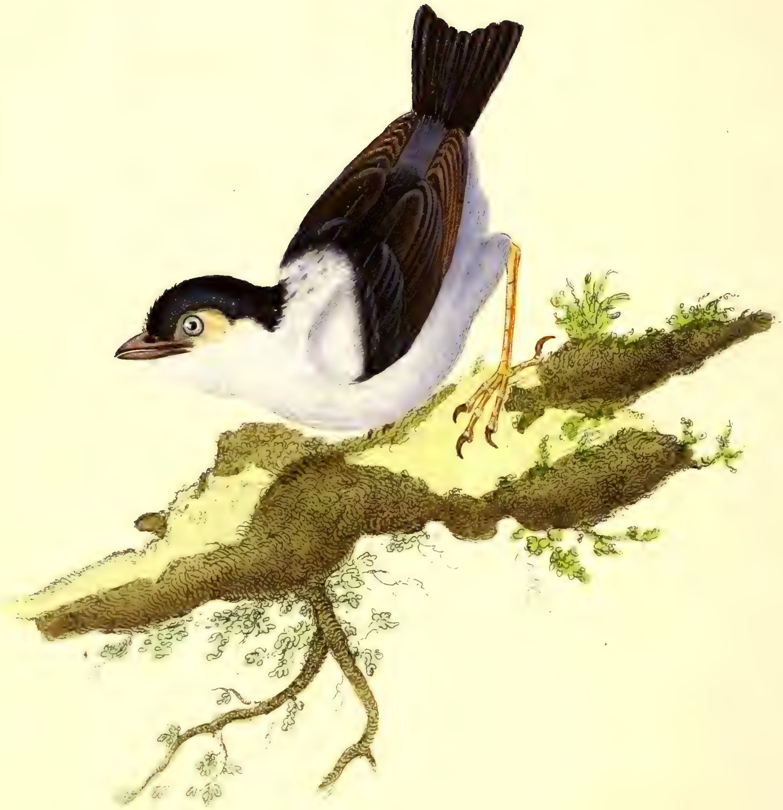
The upper figure in the annexed plate is that of Papilio Arethusus; the lower ones exhibit the upper and under surface of Papilio Phalaris, and both are displayed upon a tuft of that beautiful kind of African heath introduced from the Cape of Good Hope into

Britain, in the year 1798, by Mr: Wm. Rollisson, and which has subsequently obtained the name of

ERICA HYACINTHOIDES, OR HYACINTH-FLOWERED HEATH.

It is under this appellation that the species is described in the *Hortus Kewensis,* the catalogue of plants, cultivated in the Royal Botanic Garden at Kew.

48



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ORNITHOLOGY.

PLATE XLVIII.

PIPRA MANACUS

BLACK CAPPED MANAKIN.

Passeres.

GENERIC CHARACTER.

Bill shorter than the head, strong, hard, nearly triangular at the base, and slightly curved at the tip: nostrils naked: feet gressorial: tail short.

SPECIFIC CHARACTER

AND

SYNONYMS.

Black, beneath white: spot on the wing and neck above white: cap black.

Pipra Manacus: nigra, subtus alba, macula cervicis alarumque alba. *Linn. Syst.* 1. *p.* 340. 12.—*Gmel. Syst.* 1. *p.* 1002. 12.—*Briss. IV. p.* 442.—*Id.* 8*vo.* 11. *p.* 168.

PLATE XLVIII.

Le Casse noisette. *Buff. IV. p.* 413.
Manakin du Bresil. *Pl. Enl.* 302. *f.* 1.

BLACK CAPPED MANAKIN. *Lath. Syn.* 4. *p.* 521. 4.—*Ind Orn.* 556. 6.

The black capped Manakin, Pipra manacus of Linnæus, is a bird of very moderate size, the annexed delineation representing it in its natural size. The prevailing colours are black, grey and white, each of which is so distinctly marked as to exhibit altogether a striking contrast even of those simple colours. There are two supposed varieties of this species, the first of which, the example now before us, has a large spot of white upon the wing, which in the other kind is wholly wanting: the absence of this white spot is supposed to characterize the female bird, and if that conclusion prove correct, the bird before us must be the male of this interesting species.

This little bird is of a lively active disposition, and is observed to be most frequent in the vicinity of Ant hills, which are abundant in Cayenne, the country which the black-headed Manakin inhabits. It subsists on insects generally, but those of the Ant tribe appear to be the most grateful to its palate, and upon these it chiefly feeds. Writers mention one particularity of this species which may be worthy of remark, namely, that these birds, besides being always in motion when in search of Ants, are observed to leap very frequently from the ground, uttering at the same time a noise not very different from that occasioned by the cracking of a nut. Those frequent leaps of the Manakin are attributed to its endeavour to escape from the Ants, when its feet are bitten by the invaded swarm in revenge for the intrusion, and the noise an ejaculation of pain at the moment it is bitten.

19

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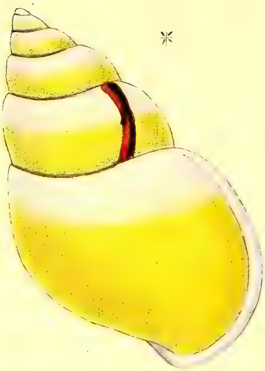

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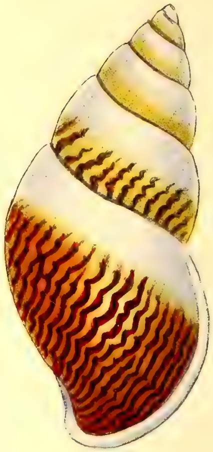

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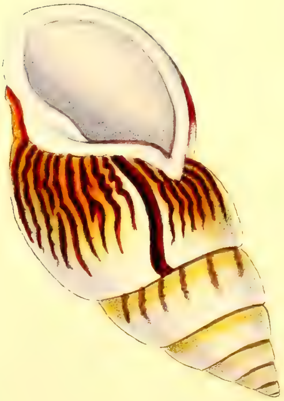

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CONCHOLOGY.

PLATE XLIX.

HELIX PERVERSA

PERVERSE HELIX.

UNIVALVE.

Shell spiral, somewhat diaphanous, brittle: aperture contracted, semilunar or roundish.

SPECIFIC CHARACTER
AND
SYNONYMS.

Whorls turning right or left, ovate oblong, smooth, yellow, with or without rufous spots, or streaks, lip white, reflected.

HELIX PERVERSA: testa dextra vel sinistrorsa, ovato-oblonga,
læve, flava, vel immaculata vel maculis, vel
strigis rufis; labro albo reflexo.

PLATE XLIX.

HELIX PERVERSA: testa subumbilicata ovata-oblonga contraria sulphurea. *Linn. Mus. Lud. Ulr.* 669. *n.* 374. *Gmel. Linn. Syst. Nat.* 3642. *n.* 94.—*Seba Mus.* 3 *t.* 40 *f.* 37.

Helix dextra. *Mull. Verm.* 2 *p.* 89.—*Chemnitz* 9. 2. *p.* 153. *t.* 134. *f.* 1210.—1212.—*Gmel. p.* 3643.

Helix sinistra. *Mull. Verm.* 2 *p.* 90.

Limax aureus. *Martyn. Univ. Conch.* 3. *t.* 115.

CHERSINA FULVA: *b. Le jaune, yellow chersin Prince's Island.* CHERSINA PERVERSA, *the reverse yellow chersin Prince's Island.* CHERSINA PERVERSA, *f. yellow chersin, striped with rich red brown.* La Bouche á Gauche, reverse. L'ESCARGOT. *Cat. Calonne, Mus. p.* 63. 1163. 1164.

BULIMUS CITRINUS: *Bruguiere Encycl. Method. p.* 313. reverse *Brug. Enc. Method. p.* 314.

HELIX AUREA. *Dillwyn Catal. Shells, t.* 2 *p.* 936. *n.* 113.

HELIX AUREA. *Daudeb. Hist. des Moll. No.* 414.

BULIMUS CITRINUS: Bulime citron, *Lamarck. Anim. sans Vertebr. t.* 6. *p.* 2. 119.

The more fully we consider the shells before us and their immediately approximating varieties, the more entirely we become persuaded that several shells of this kind which have been described by writers as specifically distinct, are in reality of the same individual species, and should be restored to this parent stock. We readily admit that at first view there may appear an obvious dissimilarity in the aspect of these shells: a difference in their colours, in the form and disposition of their bands, spots, and lineations, and other less material points that may seem to justify their separation in the minds of those who have not regarded with very minute attention the sportiveness of nature in such particulars. But with so many advantageous means of comparison as the more abundant species of terrestrial Helices afford, in this and every other country, the experienced Conchologist will be less likely to be deceived: he will regard them with due caution, and may perhaps be inclined to reduce the number of the species, even where to common observation there may still appear some necessity for constituting species in greater number *.

Linnæus has described the type of this species, his Helix Perversa, as having the wreath of the whorls turning in the reverse or contrary direction from that of other univalves. This is not, however, uniformly the case with Helix Perversa, for as they naturally wreath spirally from the mouth, and that the mouth is sometimes

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* This is most amply demonstrated in several different kinds of the striped or banded Helices. HELIX NEMORALIS, found throughout Europe and in great abundance in Britain, is truly illustrative of this particular. These vary from a white to a paler or deeper yellow, sometimes without any band, sometimes with a single band, two bands, or a greater number to the amount of five or more. Sometimes the lines are narrow; at others broad, and so closely placed that the yellow appears only in the form of extremely fine spiral lines, and even this in others is wholly wanting. *Vide Donovan's British Shells*, vol. 2. tab. 13. HELIX ZONARIA, vol. 2 t. 65, affords us other interesting examples, and so likewise the varieties of HELIX HORTENSIS. *Vide Donovan's Br. Shells.*

situated on the right side, and sometimes on the left, the wreaths of these two shells will be inverse to each other, and these are the "dextra" and "sinistra" varieties or species of authors. The most frequent of the varieties of Helix Perversa are those which turn in an inverse direction, and the rarest those whose volutions are in accordance with spiral shells in general. This difference in the direction of the spire can by no means constitute a specifical distinction when the shells are in all other respects the same. Few species of the testaceous tribes are constantly reverses; there are some *, and reverses of those shells are rare as well as contrary shells of those which usually wreath in the ordinary manner; examples however do occur sometimes, and in sufficient number to assure us that this circumstance alone can be no criterion of a species, and that probably no species can be deemed exempt from such an accidental deviation in its structure.

With respect to the varieties of this shell they appear reducible to two primitive kinds, the immaculate and the striped or spotted. The immaculate kind is of a yellow colour, varying to a pallid tint; sometimes the yellow is tinged or clouded with a pale greenish hue, more or less inclining to blueish, while in others it is of a rich and

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* The species Turbo perversus are constantly reversed or contrary shells. *Donovan's Br. Shells,* vol. 2, t. 72. A reversed kind of Helix pomatia occurs in Hungary pretty frequently, while in England the spire of the same species turns as usual in other Helices. *Br. Shells,* vol. 3, t. 84. Reversed shells of the Helix hortensis, or garden snail, are rare, we have heard of three examples, one of which was valued at ten guineas; we have also seen Helix arbustorum reversed. Other instances might be produced among the spiral shells of several different genera, but the above may be considered sufficient to prove that the mere circumstance of being reversed is no evidence of specifical difference.

glowing yellow. It is under these differences of appearance that the same species has been divided by some collectors into different species, and hence it is that besides *perversa* we find *cærulescens*, *virescens*, *citrina* (or *citrinus*,) and *aurea* (or *aureus*,) all which variations in the tints or shades of colour may be very safely attributed to accidental causes producing a discolouration of the natural complexion of the shell, which is of a yellow colour, more or less vivid, or varying from a pale citron hue to a fine yellow.

Perhaps we ought to mention that there is some slight difference occasionally observable in the greater or less development of the lip and margin, and which in the region of the umbilicus sometimes extends so far as partially to cover it. There are variations dependent only upon its state of growth, the lip being thinner in the younger shell and becoming gradually more enlarged as it advances towards the adult state. The records of science are not without examples even of such progressive appearances being considered as generical indications, and we cannot therefore be surprised to find it regarded by other more cautious naturalists as probably nothing more than a specifical distinction.

Besides these shells, which are entirely yellow, there are others which exhibit a single longitudinal brown streak, or band, and sometimes two, remotely distant from each other, across the first or second volution.

The third kind or variety are those which are striped or spotted. Those, like the preceding, are reversed, or otherwise, for the spiral wreath is not uniformly in the same direction; generally they are reversed shells. These exhibit spots or marks of a brown colour, more or less intense, sometimes disposed in longitudinal lines or undulations, and those lines are either continuous or intersected; The intersecting lines are usually paler, and these dividing the stripes at regular intervals contribute to give the shell a tesselated appearance of deep or fuscous brown spots upon a yellowish ground: Generally these longitudinal bands are confined to the first or second whorl, appearing pretty numerous on the first, more sparingly on the second, and entirely disappearing beyond. Most commonly these longitudinal stripes are interrupted by a broad band of white, commencing at the upper part of the lip and passing entirely round the whorl below the sutural line. There is also sometimes a spiral band that traverses those whorls about the middle, and occasionally specimens occur in which more than one of those pale spiral bands traverse the middle of the shell. In the example now before us there is no such spiral band surrounding the middle of the shell; the streaks are longitudinal and somewhat undulate but not interrupted except by the broad whitish band which passes below the suture, and at the verge of which they abruptly terminate. Some of the above-mentioned varieties accord extremely well with those which Linnæus describes from specimens in the museum of Ulrica, Queen of Sweden, namely, *α flava, β flava linea una alterave purpura, γ pallida fasciis transversis fuscis confertis.*

Those shells are of the land or terrestrial tribe, inhabiting the forests of Cayenne and Guinea, and also those of the West Indies, Pulo Condore, and China. The individual specimens we have represented are from Prince's Island, in the Pacific Ocean, the specimens of the late Leverian Museum, and presumed to be the largest and most perfect known.

For the discovery of those fine varieties of Helix perversa, the naturalist is indebted, as in many other instances, to the assiduous attention of Sir Joseph Banks, by whom they were brought from Prince's Island, in the Pacific Ocean. The circumstance that introduced them to his notice deserves mention. During the voyage of discovery, made by Captain Cook in those seas, in which he was accompanied by that eminent naturalist and his scientific friends, the expedition touched at Prince's Island, and a party of sailors was sent ashore in search of water and to cut timber. Thus employed they felled a number of the loftiest trees, and upon the uppermost branches of those trees, when brought to the earth, this species was found crawling like other snails among the foliage. Sir Joseph Banks being present, was thus enabled to select the shells from those otherwise inaccessible branches at his pleasure, and as the foliage afforded every variety of those shells, he was happily enabled to form a choice assortment of the whole. This peculiarity of the species, living upon the upper branches of the highest trees only, may possibly explain the cause of the present rarity of those shells, even should the Island be occasionally visited by our navigators. All the specimens known among collectors, so far as we can learn, are those which were found at that time by Sir Joseph Banks, and distributed among his friends in England upon his return.

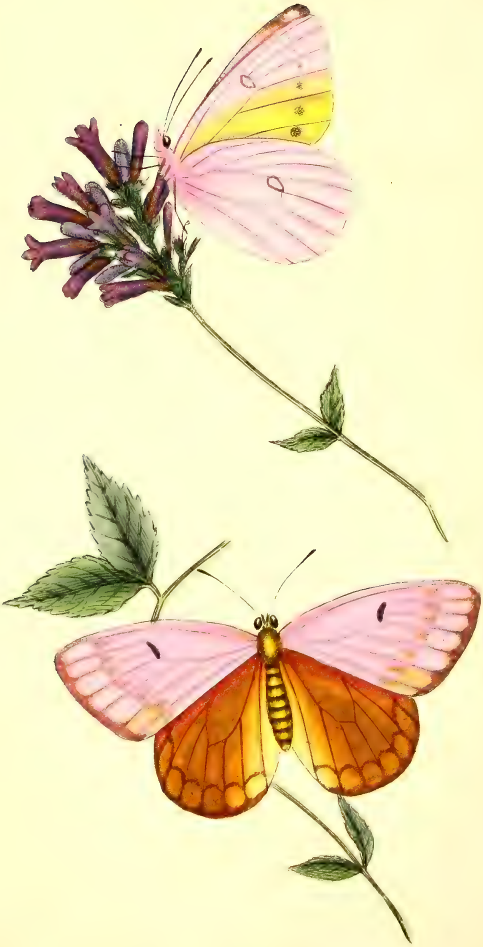
Mr. Dillwyn observes that Linnæus considered the Helix Perversa as a river shell; Linnæus was certainly so far mistaken, he says nothing of its habitat in describing the shells in the cabinet of the Queen of Sweden, but in the 12th edition of Systema Naturæ we find *Habitat—fluviatilis.* We may also add that Seba was no less in error, if he really meant the same shell, for he calls it "Cornet de Mer" from which we must conclude he regarded it as an inhabitant of the marine element.

Among the various generical changes which the science of Conchology has undergone of late years those shells have not wholly escaped transposition; they appertain distinctly to the turrited family of Helices in the Linnæan mode of classification; the generical appellation of Escargot, assigned to it by some writers, may be deemed synonymous. Chersina, another of its generic epithets, is rather more remote. Scopoli, and after him Bruguiere, proposes to name it generically Bulimus, and Lamarck, De Montfort, and Cuvier follow them, but each with some peculiar modification. The generical distinction of the Helix genus, as defined by Linnæus, consists most essentially, besides its being a spiral shell, in the form of the mouth or aperture, which is either contracted, semilunar, or roundish, a character confessedly too diffuse, and well deserving of amendment. The character of Bulimus consists in the shell being ovate-oblong or turrited, but never orbicular, like the Helices, the aperture entire and longer than broad; the margin very unequal and disunited above; pillar lip straight, smooth, entire at the base, and not effuse. In addition to this character of Bulimus, as expressed by Lamarck, De Montfort proposes that the spire should terminate obtusely, which is not the case with all the shells referred by other writers to the Bulimus genus: he also mentions the pillar lip being smooth and having an inflexion in the middle, which does not accord with the definition of the genus as laid down by others. It may be also added, that the Bulimes of Bruguiere have been again subdivided by

Lamarck; his genus Achatina is composed in part from these. Bulimus purpurescens is an example of this new genus. Having entered so fully into the various changes which have been adopted by naturalists in the classification of those shells, it will remain with the reader to consider the propriety of following the new order of science, by denominating the present shell *Bulimus citrinus*, or retaining it, as we have done, under the established denomination of the Linnæan nomenclature, Helix perversa. As a trivial appellation, "perversa" is assuredly most applicable, since it comprehends alike the striped or spotted, and the plain varieties, while that of *Le citrone* (citrinus), which is destined to indicate the species in its spotted as well as spotless state, is adopted only in reference to the colour of those which are not spotted. It might, without any impropriety be called *Bulimus perversus*, by those disposed to admit that genus.

The upper figure in the plate represent the deep yellow variety called by some authors Helix aurea, or the perversæ golden Helix: the two figures below, the striped variety.

50



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ENTOMOLOGY.

PLATE L.

PAPILIO LESBIA

LESBIA BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a kind of club: wings erect when at rest. Fly by day.

** P. DANAI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, fulvous, with a black point in the middle of the anterior ones: beneath pale, with a snowy white dot in the middle of each.

PLATE L.

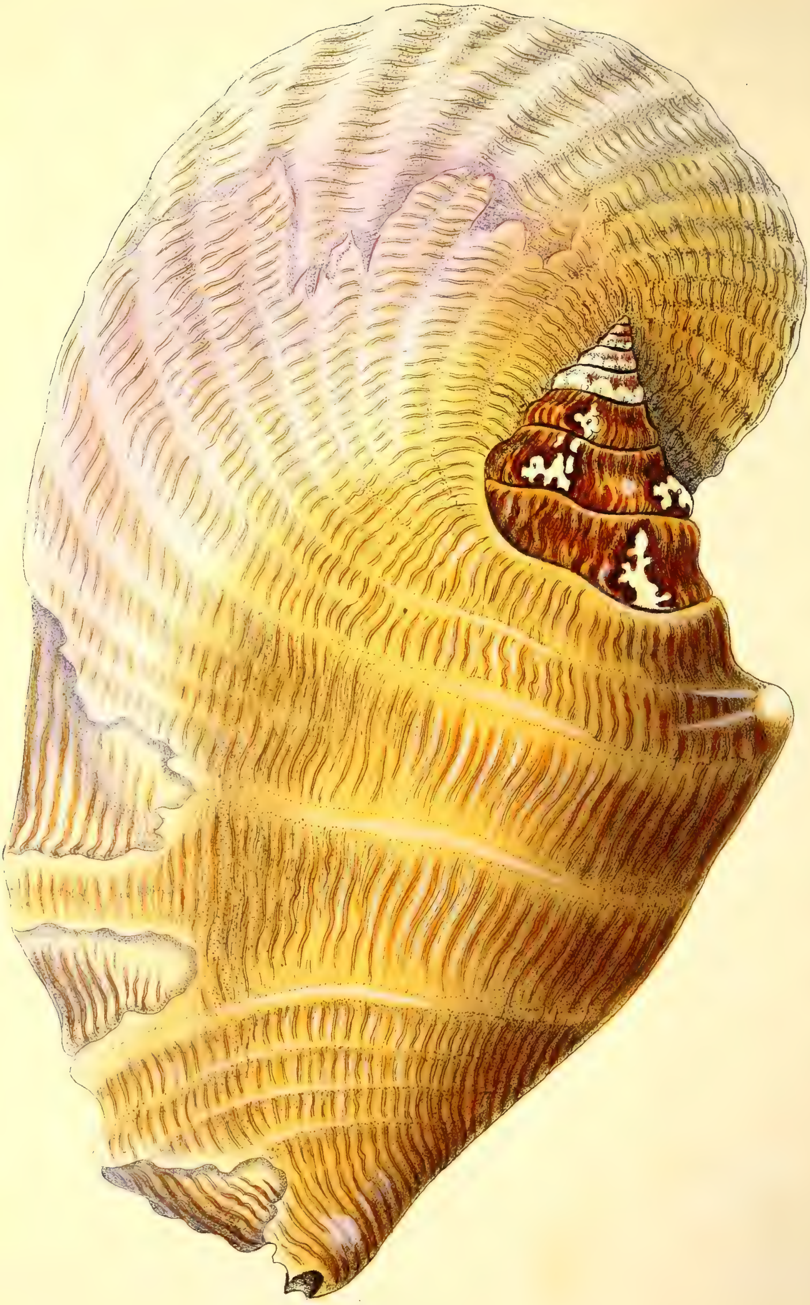
Papilio Lesbia: alis integerrimis fulvis: anticis puncto fusco, omnibus subtus pallidis: puncto niveo. *Fabr. Ent. Syst. T. 3. p. 1. p. 208. n. 652.*

Papilio Lesbia is a lovely insect of the *Danai* tribe, and is of extreme rarity, if not unique. It was found scarcely less than half a century ago, upon the shores of Patagonia. The only example of the species with which we are acquainted, and consequently that from which the annexed figures are taken, constitutes a part of the Banksian cabinet, and was copied by the kind permission of its inestimable founder during his lifetime for the purposes of our entomological publications.

It is material to mention this circumstance, because the naturalist will be aware that the only authority to which Fabricius refers for his Papilio Lesbia is the Banksian cabinet, and it is of the first importance on every such occasion to establish the identity of the species upon the most indubitable anthority. Fabricius has usually referred to the drawings of Mr. Jones, when those included figures of the insects he described, but which, in the present instance is unintentionally omitted, for there is a drawing of the species in that collection, taken from the same subject, and inscribed with its specific name and character as it subsequently appeared in the Entomologia Systematica of Fabricius. It is the authority of this manuscript, in addition to the label annexed by Fabricius to the insect in the Banksian cabinet that enables us to ascertain the species he intended beyond the possibility of doubt. We can be under no apprehension of speaking incorrectly when we venture to add, that the present are the only figures that have appeared in elucidation of this interesting subject.

Papilio Lesbia is an insect of moderate size: above, the anterior wings are of a delicate brownish colour, partaking of a roseate tint; the tip brownish, with a series of ovate spots of the same rosy hue, and the stigma or spot in the middle of the wing, deep brown: the posterior wings are fulvous, with the end brown, and marked with a series of fulvous spots. The appearance beneath is somewhat different: the colour of the wings is pale and rosy, with a yellowish tint on the posterior part of the first wing. There is also a series of brownish spots towards the end of the anterior wings, and a central white spot in the disk of both the anterior and posterior pair.

51



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CONCHOLOGY.

PLATE LI.

STROMBUS LATISSIMUS

BROAD-WINGED STROMBUS.

UNIVALVE.

GENERIC CHARACTER.

Shell univalve, spiral, aperture much dilated: the lip expanding, with a deep sinuosity towards the lower part, and at the base truncated.

SPECIFIC CHARACTER
AND
SYNONYMS.

Lip rounded and very large: belly unarmed: spire somewhat knotty.

PLATE LI.

STROMBUS LATISSIMUS: testæ labro rotundato maximo, ventre inermi, spiræ subnodosa. *Linn. Mus. Lud. Ulr.* 622. *n.* 284.—*Gmel. Linn. Syst. Nat.* 3516. *n.* 21.

Alata lata. *Rumpf. Mus. t.* 36. *f. L.*
Seba Mus. 3 *t.* 63. *f.* 1. 3.

One of the most choice and magnificent shells at present known There are few cabinets of distinguished eminence in which the species does not occur in the earlier stages of its growth, but it is rarely met with in that adult and perfect state in which it appears in the annexed plate.

When in the younger state, the broadly-expanded or wing-like lip, so conspicuous in its final growth, is wholly wanting, the lip terminates in a very thin acute edge, and this, owing to its brittle texture, is not always found extremely perfect. After the shell has attained to a moderate size, this lip begins to thicken and enlarge, increasing in dimension as the growth proceeds, and at length becomes of a very considerable size in proportion to the magnitude of the whole shell. In its most perfect, or full-grown state, the lip turns inwardly, forming a pretty thick margin, which is usually striped or banded, and adds much to the strength as well as beauty of the full-grown shell.

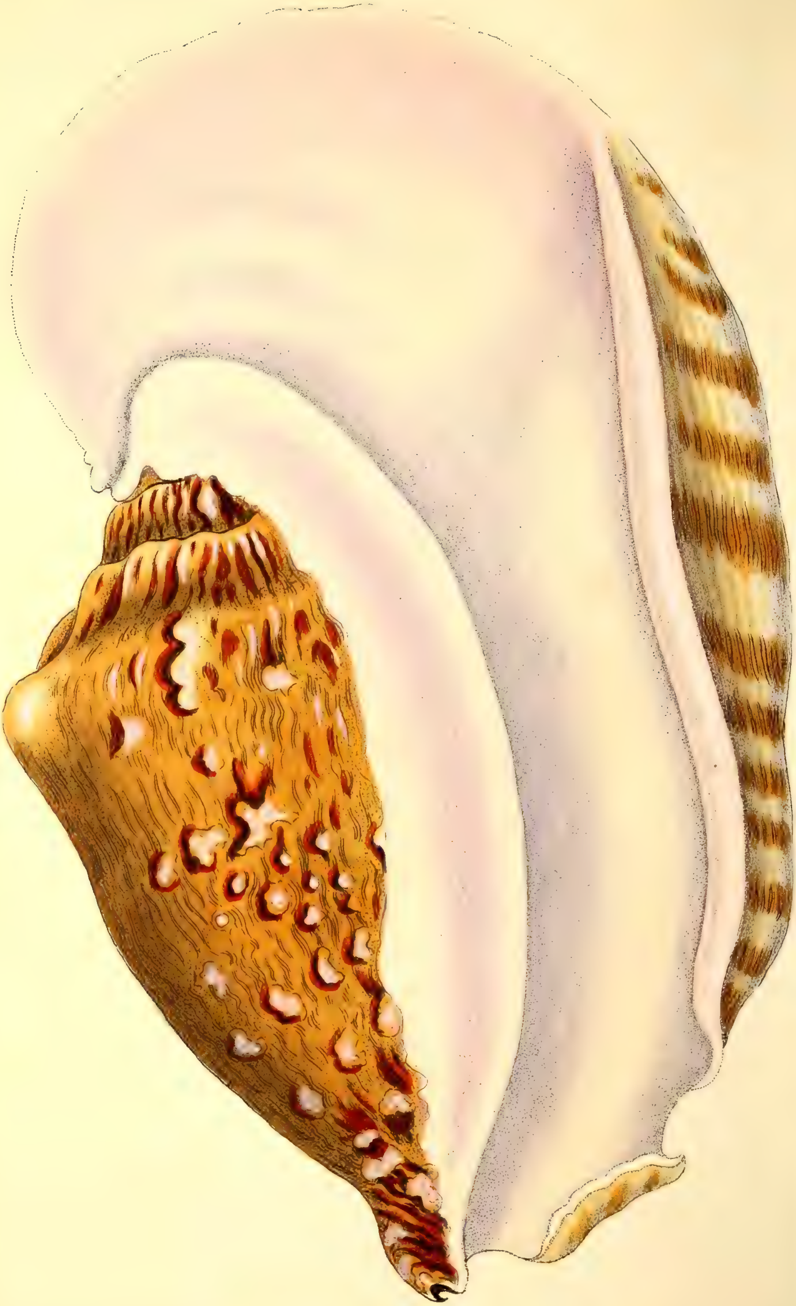
The figure now submitted to the reader represents the specimen of the species originally in the Museum of the late Sir Ashton Lever;

and was, during the period of the public display of that collection, a very distinguished object in the conchological department. At the time of the dispersion of that collection by public sale, it produced the sum of eight guineas. We have since that period, occasionally, though rarely, seen examples of the shell, equally fine, but such specimens, when on sale, have ever been objects of competition, and have never failed to realize a price no less considerable in proportion to their excellence.

The colour of the outside of the shell is brownish, varying from a deep fulvous to a dark chesnut, disposed variously, sometimes appearing partly banded, or clouded, and variegated with white or whitish spots. The aperture, or mouth, together with the pillar lip, as well as inner surface of the wing-like expansion, is usually tinged with red or rose-colour.

This splendid species is a native of the Indian seas. The specimen delineated is from Amboyna.

52



London. Published by E. Donovan & Meſs.rs Simpkin & Marshall Sept. 1. 1823.

CONCHOLOGY.

PLATE LII.

STROMBUS LATISSIMUS

BROAD-WINGED STROMBUS.

UNIVALVE.

GENERIC CHARACTER.

Shell univalve, spiral, aperture much dilated; the lip expanding, with a deep sinuosity towards the lower part, and at the base truncated.

SPECIFIC CHARACTER
AND
SYNONYMS.

Lip rounded and very large: belly unarmed: spire somewhat knotty.

STROMBUS LATISSIMUS: testæ labro rotundato maximo, ventre inermi, spiræ subnodosa. *Linn. Mus. Lud. Ulr.* 622. *n.* 284. *Gmel. Linn. Syst. Nat.* 3516. *n.* 21.

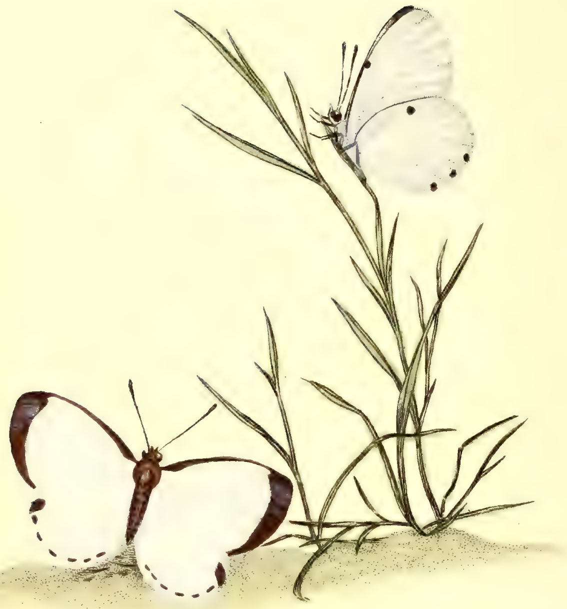
PLATE LII.

In the preceding plate we have introduced the representation of that magnificent shell the Broad-winged Strombus, or Strombus Latissimus of Linnæus and most other writers.

Owing to the unusual magnitude of the shell, it was only the dorsal view of this species that could be given in that plate without diminishing the representation to a size too diminutive to convey an adequate idea of the shell. The lower surface or aperture is no less interesting than its dorsal view, or less explanatory of its characters, and it is for this reason that the subject has been reserved for the present plate: the two plates following immediately in succession, and thus mutually assisting each other in the elucidation of this very superb shell.

It has been already observed, that the ample dilated lip or wing of the present species is the character by which its state of full maturity is distinguished, the lip in the younger state being destitute of any such dilation. In the present representation of the subject this expansion of the lip is more conspicuous than in the dorsal view, and the peculiar lobe and sinuosities of the lip, which form the generical distinction of the Strombus genus, and which do not appear in the dorsal view, are here particularly conspicuous.

We have before mentioned that this fine shell is a native of the Indian seas.



London Published by E. Donovan & Meſs.^{rs} Simpkin & Marshall Sept. 1 1823

ENTOMOLOGY.

PLATE LIII.

PAPILIO ELOREA

ELOREA BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a club: wings erect when at rest. Fly by day.

* Pap. Danai Candidi.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings rounded, entire, white: tip of the anterior pair, with a spot and marginal dots on the posterior ones black.

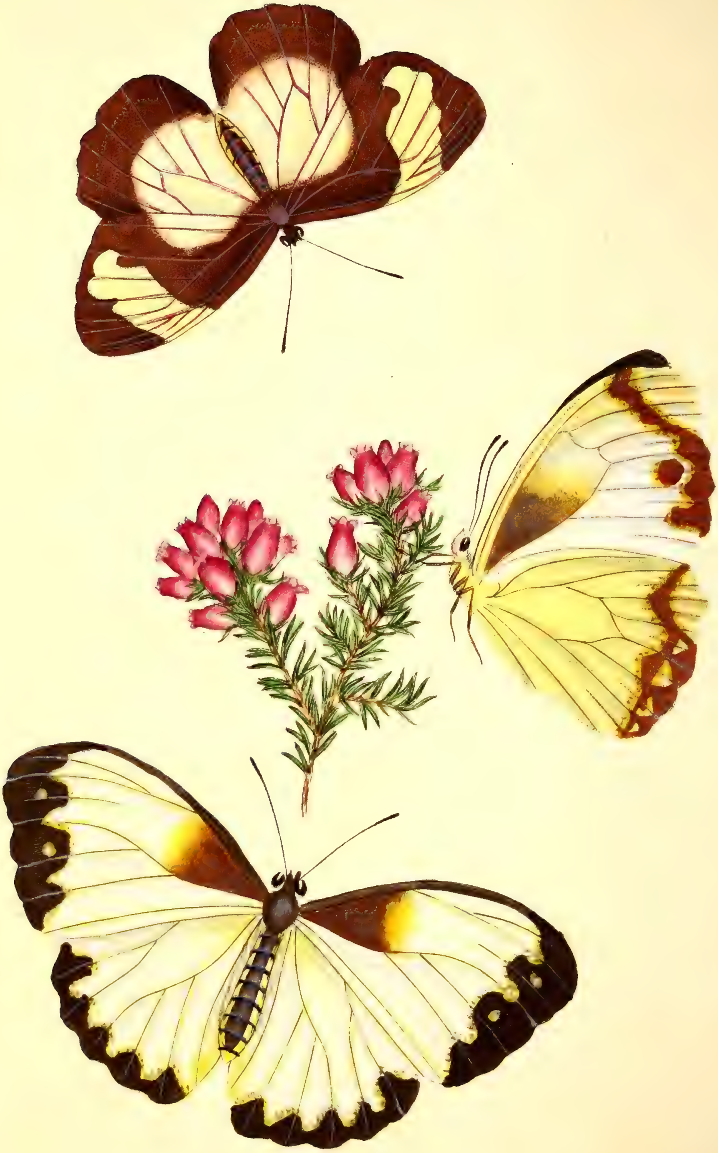
Papilio Elorea: alis rotundatis integerrimis albis: anticis apice, posticis macula punctisque marginalibus nigris. *Fabr. Ent. Syst. t.* 3. *p.* 1. 194. 603.

PLATE LIII.

Papilio Elorea is one among the number of those Fabrician species which we are persuaded can be at this time identified with certainty only by ourselves, for it is not too much to assert that every other document, with the solitary exception of our own drawing, have disappeared in the lapse of time from the reach of science. Fabricius described the species from an example in the cabinet of the late Mr. Jones; and who, besides possessing the specimen, had delineated the insect in a most accurate manner in his collection of paintings. Both the insect and the drawing were labelled by Fabricius in his own hand-writing at the desire of Mr. Jones, and it was from those authorities that the figures were taken which are now submitted to the reader.

This insect is of the smaller size, the upper surface white with the costal rib and exterior margin black. The head, thorax, and abdomen blackish, and a black spot and series of black dots disposed along the posterior margin. Beneath, the colour of this fly is rather more inclining to blueish than above, and is marked with five distinct black spots, or dots, of a rounded form, one of which is placed on the main rib of the anterior pair, another contiguous to the main rib of the posterior ones, and three equidistant black spots at the margin.

54



London Published by E.Donovan & Meſs.rs Simkin & Marshall Sept. 7. 1823.

ENTOMOLOGY.

PLATE LIV.

PAPILIO PIRITHOUS

PIRITHOUS BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip and usually terminating in a kind of club: wings erect when at rest. Fly by day.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings entire, above fuscous; band on the anterior pair, with the disk of the posterior ones, and entirely beneath white, or yellowish white.

PAPILIO PIRITHOUS: alis integerrimis supra fuscis, anticis fascia, posticis disco omnibusque subtus albis. *Fabr. Syst. Ent.* 483. 179.—*Spec. Ins. t.* 2. 59. 261.

PLATE LIV.

This singular insect, like many others of the Papilio tribe which we have already introduced to public notice, is a species not a little enveloped in obscurity. Fabricius, when he visited this country about fifty years ago, observed this species in the cabinet of Sir Joseph Banks, and subsequently described it in his work entitled "Species Insectorum," under the name of Papilio Pirithous, with the definition "alis integerrimis supra fuscis, anticis fascia, posticis disco omnibusque subtus albis." He also refers expressly to the Banksian Museum for this insect, and adds that the species is a native of North America.

It is not less extraordinary than certain, that a species so well defined, and of such magnitude, does not appear in the latter work of this author, his "Entomologia Systematica," nor is there any insect under the same name in that publication. The specimens in the Banksian cabinet had also been by some accident misplaced, and from those circumstances we might, in the absence of other information, have been led to suspect that its insertion in the first instance must be in some degree unauthorized, and the error corrected in the latter publication. This, however, does not prove to be the case, for the collection of Mr. Jones contained a drawing made from the specimens in the Banksian cabinet, to which the Fabrician name and character, in the hand-writing of that author, was attached; and thus the identity of the species which that writer had intended stands confirmed beyond a doubt. Mr. Jones was himself surprised at the omission of the species in "Entomologia Systematica," because the existence of the species could not possibly be disputed. The figure delineated in the upper part of the annexed plate is copied from the drawing of Mr. Jones, to which the Fabrician MS. was annexed.

Every naturalist is aware that most of the species in this very extensive tribe of insects have been named by all writers from the time of Linnæus to the present after the heroes and heroines real and imaginary, the fabulous divinities, and beings of mythology, which have been consecrated to fame by Homer and the other poets of the classic ages: those allusions are sometimes happy, but not invariably so. In the present instance it may be observed that Fabricius appears to have named this insect, either in allusion to its dark or clouded appearance surrounding an enlightened disk, or from some fancied resemblance in the surrounding limb to the circumference of a wheel. Pirithous is fabled by the poets to be the son of Ixion and the cloud. Ixion is also reputed to have been fastened to an ever revolving wheel in the realms of Pluto. Some fablers say that when Pirithous dared to enter those regions, he was tied to the wheel of his father Ixion. To which of these fables Fabricius adverts does not appear, it may possibly be the latter.

FIG. II.

PAPILIO POPPEA

POPPEA BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip and usually terminating in a kind of club: wings erect when at rest. Fly by day.

** P. Dan. Cand.

PLATE LIV.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings rounded, entire, white : margin spotted with black : at the base of the anterior pair a ferruginous spot.

Papilio Poppea : alis rotundatis integerrimis albis : margine nigro maculato, anticis macula baseos ferrugineus. *Fabr. Ent. Syst. t. 3. p.* 1. 188. 581.

This is an insect of much gaiety and beauty, and is also sufficiently conspicuous in point of magnitude to form a striking object in the series of White Papiliones *Danai Candidi* to which it appertains.

The prevailing colour of this species white, or white tinged with yellow ; above the wings are white, except the broad indented limb, or border, which is black ; and a large triangular patch of ferruginous orange, at the base of the anterior pair. Beneath, the white is blended with pale yellowish. The ferruginous spot at the base of the anterior wings is also conspicuous, and there is likewise a limb or border along the posterior margin, but which is of a brown colour instead of black, and more irregularly broken with patches and spots of a paler hue than the border as it appears on the upper surface.

ENTOMOLOGY.

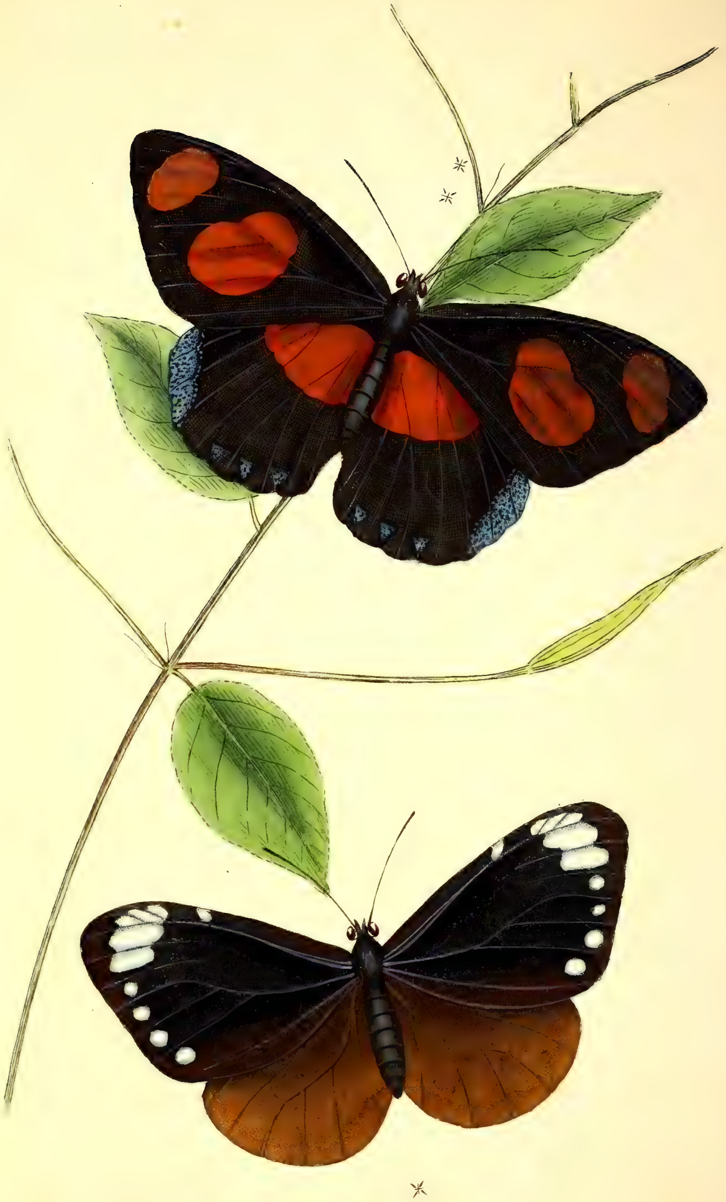
Papilio Poppea is a native of Africa, Fabricius says of Sierra Leon. It is represented in a flying position as well as at rest, having the wings erect, in the annexed plate.

The plant upon which these insects are displayed is

ERICA SAVILLII, SAVILLE'S HEATH,

a native of Africa, lately introduced from the Cape of Good Hope.

55



London Published by E. Donovan & Mess.rs Simpkin & Marshall Nov.r 1. 1823

ENTOMOLOGY.

PLATE LV.

FIGURE I.

PAPILIO TULLIOLUS

TULLIOLUS BUTTERFLY.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a kind of club: wings erect when at rest. Fly by day.

P. FESTIVI.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings entire: anterior pair deep black with a white macular band: posterior pair fuscous, above immaculate, beneath dotted with white.

Papilio Tulliolus: alis integerrimis: anticis atris; fascia maculari alba, posticis fuscis supra immaculatis, subtus albo punctatis. *Fabr. Ent. Syst. t.* 3. *p.* 1. 41. 123.

Papilio Tulliolus: *Jon. fig. pict.* 3 *tab.* 67. *fig.* 1.

An insect nearly allied to Papilio Midamus in size and general aspect; it appears also to be a scarce species and very little known. This we must presume from the insect being described only by Fabricius, while Papilio Midamus is to be found in the works of many authors, from the Stockholm Transactions for 1748, to which Linnæus in Mus. Ulr. refers, to the later publications of Sulzer, Klemann, and Cramer, and other works subordinate to those.

Papilio Tulliolus occurred to Fabricius in the cabinet of Mr. Jones, and its figure among the drawings of that gentleman; to both these Fabricius has referred for the species. His reference to those drawings as they stand in his *Entomologia Systematica*, "Tom. 3. p. 69." in which we observe a trifling error, for it is at pict. 67. fig. 1. of that volume, and not at pict. 69. that the figure of this insect occurs. This error is probably attributable to the press, but there is another in which Fabricius himself must err, for he states Papilio Tulliolus to be a native of India, upon the authority of the cabinet of Mr. Jones; the insect may be perhaps a native of India (or at least an Asiatic species) as Fabricius mentions, but most assuredly there was no *habitat* annexed to the specimen in the cabinet referred to, nor any inscribed upon the drawing; neither was Fabricius authorized by any assurance of Mr. Jones to believe it to be an Indian insect, and it was for this reason, by the advice of our very worthy friend Mr. Jones, that the species, though marked by us for publication, was purposely omitted in the work on Indian Insects, which we produced to the world about twenty years ago. We have no hesitation in adding that the figure now submitted is the only one that has appeared of P. Tulliolus, and as it will have been perceived is the only authority for this interesting species that is now extant.

In point of magnitude Papilio Tulliolus is entitled to consideration. It is in this respect inferior to very few of the same family. The colours of this insect are not brilliant, they are deeply tinctured with a sombrous aspect, but its general appearance is interesting. The upper wings are dark or blackish fuscous, tinged with blueish, and prettily relieved with a band of white spots and dots, and a spot of the same colour near the middle of the costal rib; the posterior wings livid and spotless. Beneath, the colour is brown, spotted with white. There is a species described under the name of P. Claudius which resembles P. Tulliolus, particularly in the under surface, but which may be readily distinguished by having the upper surface of the posterior wings marked with white lines, instead of being plain as in P. Tulliolus.

This butterfly is represented in the lower part of the annexed plate.

FIG. II.

PAPILIO NUMILIUS

NUMILIUS BUTTERFLY.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a kind of club: wings erect when at rest. Fly by day.

P. FESTIVI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire black: anterior wings with two fulvous spots: posterior ones with a single spot.

PAPILIO NUMILIUS: alis integerrimis atris: anticis maculis duabus, posticis unica fulvis. *Fabr. Ent. Syst. t. 3. p.* 1. 53. 164.

This species, which is represented in the upper part of our plate, is an insect of great beauty, and appearance the most singular. It has not confessedly the same claim to the consideration of the scientific naturalist as the preceding, because it has appeared already in the work of Cramer; the gaiety of its appearance will, however, we are persuaded, furnish a sufficient apology for its introduction into the present work, and its extreme rarity cannot fail to strengthen its claim to notice.

This beautiful species, which is a native of Brazil, Fabricius describes from a specimen in that invaluable repository of Entomological knowledge, the Banksian cabinet. There is, besides this, a very choice example of the species which we have lately seen in the rich cabinet of our good friend A. H. Haworth's, Esq. of Queen's Elms, Chelsea.

Papilio Numilius is an insect of superior size as well as beauty; the wings are black, with two large fulvous spots on the anterior ones, and one on the posterior. There is also a blue space and three triangular spots of the same colour disposed along the posterior margin; the prevailing colour beneath is yellowish brown with a dark brown band across the anterior ones towards the tip.

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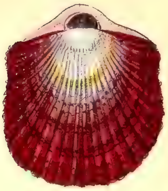

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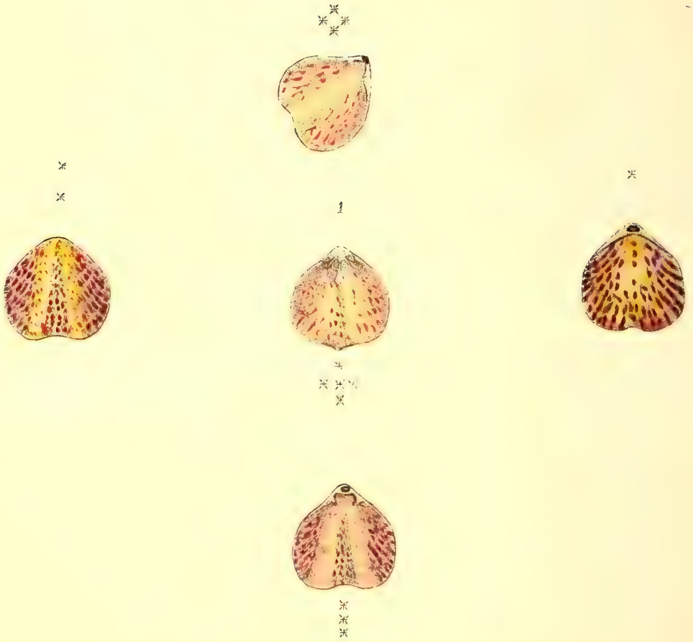

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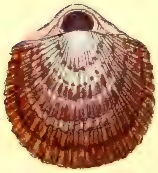

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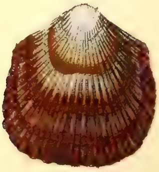

London Published by E. Donovan & Mess.rs Simpkin & Marshall. Oct. 1, 1823

CONCHOLOGY.

PLATE LVI.

FIGURE I.

TEREBRATULA CRUENTA

BLOOD-SPRINKLED TEREBRATULA.

OR

LAMP ANOMIA.

BIVALVE.

GENERIC CHARACTER.

Shell inequivalve regular, somewhat triagonal: upper valve imperforate, lower valve beaked above the hinge, the beak usually incurvate, perforated at the tip or grooved for the passage of a short tendinous pedicle, by means of which it adheres to other bodies. Hinge with two teeth and two osseous elevated and fureated processes, arising from the disk of the upper or smaller valve, and destined to support the animal.

PLATE LVI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell somewhat heart-shaped, smooth, sprinkled with red: upper valve bilobate: lower with a longitudinal hollow: beak perforated.

TEREBRATULA CRUENTA: sub cordata, lævi, rubro irrorata, valva superiore bilobata inferiori convalle longitudinali, nate perforata.

ANOMIA CRUENTA: ovato-obcordata, lævi rubro irrorata, antice sinuato-retusa, nate perforata abbreviata, foramen ambiente. *Solander MSS. in Mus. Banks.*

This elegant little testaceous body is eminently entitled to the consideration of the naturalist, being no other than the true *Anomia Cruenta* of Dr. Solander's manuscripts, preserved in the Banksian library, and of the Portland Museum to which the Solandrian manuscripts refer; it is consequently the shell which has been so uniformly mistaken for and confounded with the *Anomia sanguinea* of the same author,* and not unfrequently with his *Anomia rubicunda* also.

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* By some accident or oversight the same confusion of those species occurs in the descriptive catalogue of shells which lately appeared from the pen of Mr. Dillwyn; this is the more to be regretted because its ingenious

CONCHOLOGY.

At the time we were engaged upon the description of Anomia sanguinea, the subject delineated in the 34th plate of the present work, we alluded generally to those erroneous conclusions of conchologists, and after pointing out, as we trust, so distinctly the characteristic peculiarities of the Anomia sanguinea of Solander's manuscripts as not to be again mistaken, we concluded with a promise that the Anomia cruenta of this author should at a future period receive the like attention. We shall now endeavour to fulfil the expectation which that promise may have excited with respect to the Anomia cruenta; and we are happy to have it at the same time in our power to offer an illustration no less explanatory respecting the third species, Anomia rubicunda. This series will thus entirely set at rest every doubt of naturalists as to the identity of those three species described in the Solandrian manuscripts. The description or specific character which Dr. Solander has assigned to each respectively appears in his own words among our synonyma, and the shells from which our figures are taken it, may be added further, are the individual specimens of the Portland Museum to which that naturalist refers. Of the Anomia rubicunda we possess a specimen from the Portland collection in our own cabinet: the Anomia cruenta is from a specimen in the possession of Mr. G. Humphrey, and was the only example of the species in the Portland cabinet: combining these authorities, we cannot fail to establish the identity of those species which for so long a period have remained in doubt with naturalists.

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author was indulged with the rare advantage of consulting those manuscripts in the Banksian library, and has himself given a far more expressive specifical distinction of the species, his Anomia sanguinea, than had before appeared. The whole of his synonyms, as they now stand under the Anomia cruenta, (p. 295) must however be referred to his *Anomia sanguinea* (p. 293).

PLATE LVI.

The shell which it now appears had constituted with Dr. Solander the species Anomia cruenta, is very different from A. sanguinea, or any other of those with which it has been confounded. In the annexed plate we have represented T. Cruenta in every position that can be useful for the purpose of comparison and elucidation. The front or anterior view is distinguished by a single star *, the double star ⁑ denotes the dorsal view, in which the deep and ample longitudinal hollow of that valve is conspicuous; the three stars ⁂ the inside surface of the lower valve; the four stars *⁑* the same in another position; and the five stars *⁂* the inside of the upper valve.

From the different points of view in which Anomia cruenta is placed in the annexed plate, it will be observed to be a shell of very delicate texture; it is a thin and fragile shell and somewhat diaphanous, the spots on the exterior surface being visible through its substance. Those spots appear of a bright blood red, or rather the tint of deeply-coloured sealing-wax on the outside of the shell; within the shell they appear of a paler red, they are however precisely the same spots as those seen without, rendered visible through the substance of the shell, and therefore appear disposed in the same form or pattern as on the exterior surface.

This shell, which was long deemed unique, has certainly occurred, though very rarely, to our observation in some few collections, and of a larger size than the shell before us; indeed, in one instance as large as the Anomia rubicunda represented in our plate; but as it is our object to offer the fullest explanation of the species in our power, it was thought better to adhere in all respects to the original example which Dr. Solander had described than to give a larger figure.

It appears to be a point of much uncertainty what region of the globe this species inhabits; all the information upon this subject which Dr. Solander himself expresses, is confined to its being an inhabitant of the ocean—"habitat in oceano."

FIG. II. III. IV.

TEREBRATULA RUBICUNDA

RUDDY TEREBRATULA

OR

LAMP COCKLE.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell subrotund, somewhat truncated at the base and longitudinally striated; upper valve convex and subtrilobate, lower conico-convex.

Anomia Rubicunda: subrotunda, basi subtruncatalongitudinaliter striata; valva superiore convexa triloba, inferiore conico convexa; foramine amplo.

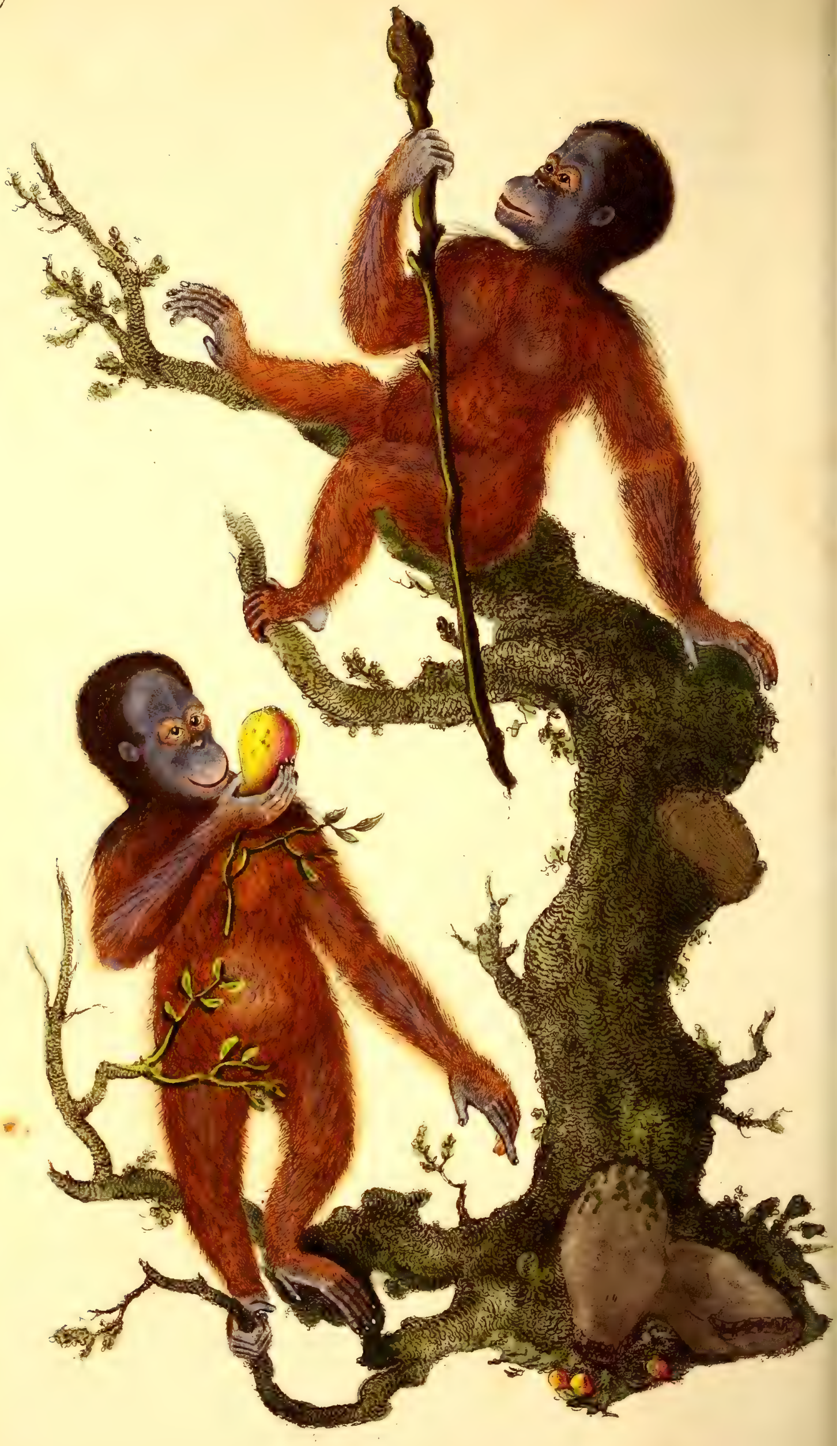
PLATE LVI.

ANOMIA RUBICUNDA: subrotunda, basi subtruncata, longitudinaliter sulcata, obsolete triloba: sinu lato, nate perforata abbreviata deorsum aperta. *Soland. MSS. in Mus. Banks.*

The Solandrian *Anomia rubicunda* appears to be the shell denominated by Chemnitz Anomia Capensis. Its native place was unknown to Dr. Solander, who merely speaks of it in general terms, "habitat in oceano," while the appellation given to it by Chemnitz leads to the conclusion of its being an inhabitant of the Cape of Good Hope; it will be however evident that the name given to it by Dr. Solander has the precedence of that assigned by Chemnitz, and that we are for this reason justified in retaining its original appellation.

We have previously intimated that the species was described by Dr. Solander from examples in the Portland Museum. There were a few entire specimens and some fragments of the species in the parcel, and which differed a little in size as well as colour: the most perfect and expressive of these were selected for the purpose of our present illustration, and appear in the annexed plate; some few portions of the fragments, or broken shells, very clearly shew that the species does sometimes attain to a larger size than the specimens selected for our representation. In respect to colour they are of a red or ruddy hue, as the trivial epithet implies, and in some instances are of a deep sanguineous tint, in others more inclining to orange; one among them of the larger size and also same fragments of the smaller size are pale, inclining to whitish.

57



London Published by E. Donovan & Meſs.rs Simpkin & Marshall Aug. 1 1823.

MAMMALOGY.

PLATE LVII.

SIMIA SATYRUS

RUFOUS ORANG OUTANG,

OR,

WILD MAN OF THE WOODS,

MAMMALIA

PRIMATES.

GENERIC CHARACTER.

Fore teeth in each jaw four, approximate: canine teeth solitary, longer, more distant: grinders obtuse.

ORANG-OUTANG. In the adult five grinders on each side in both jaws, the two anterior grinders bicuspidate, the three posterior tricuspidate. *Illiger.*

PLATE LVII.

SPECIFIC CHARACTER
AND
SYNONYMS.

Tailless, ferruginous, ears small: arms very long: hair on the fore arms reversed: haunches covered with hair.

SIMIA SATYRUS: ecaudata ferruginea, auriculis parvis: brachiis longissimis, lacertorum pilis reversis; natibus tectis.

SIMIA SATYRUS: ecaudata ferruginea, lacertorum pilis reversis natibus tectis. *Linn. Syst. Nat. T.* 1. *p.* 34. 2. 1. *edit.* 12.—*Gmel. Linn. Syst. Nat. T.* 1. *p.* 26. *n.* 1.

PYGMÆUS, Simia ecaudata ferruginea, capite lacertisque pilis reversis. (HOMO SYLVESTRIS *Edw. av.* 5. *p.* 6.) *Linn. Amoen. Acad. T.* 6. *p.* 68. *t.* 76. *f.* 4.

ORANG-UTANGS. *Camper kort Beright wegens de Outleding van verschiedene Orang-Utangs.* Ames. 1778. *Oct.*

HOMME SAUVAGE. *Annales du Museum. T. Xvii.*
SIMIA. *Erxleben, Illiger.*
PITHECUS *Geoffroy.*
ORANG-OUTANG. *Abel. Voy. China.* 1816. 1817.
ORANG-UTAN, (WILD MAN) *Marsden Sumatra. p.* 117.

MAMMALOGY.

Before we enter upon the Natural History of a Being so extraordinary as the Orang-Outang, one of the most interesting of its race, and perhaps the primate of the Simia tribe, it may not be amiss to enquire whence those feelings of dislike arise with which that tribe in general is regarded by every inconsiderate observer. It may be demanded whether those feelings are not inherent in our nature: or have not their origin in our prejudices rather than our understandings: and above all, whether they result not from a disappointment of these immediate anticipations of our mind, which it is unreasonable in ourselves to form; and of those erroneous estimates of the extent of their intellectual powers, correctness of manners, affections and sociability which their remote resemblance to the human form is at the first glance so fully calculated to inspire.

The horse, the dog, the sheep, almost every animal of the quadruped race becomes at times the object of our delight and favour, while those near approximations in similitude to the human frame excite sensations altogether different. Every trait of intelligence, docility, and mildness in the former, is the theme of admiration: while the sagacity of the latter fail to satisfy to our ideas, because we expect too much. Where we find so much resemblance in the form, we are too apt to expect a like resemblance in their actions; and we look for habits of life dictated and controuled by an analogous intelligence. Our expectations are regulated by the standard to which their external forms bear a similitude, and forgetting the condition of the human race in a state of untutored nature, we would fain draw the parallel between man as perfect in his mind and person as the creator has ordained, and those beings of the forest whose mental perceptions are scarcely more than instinct sharpened by necessity into adroitness:

and whose most perfect forms were never designed by nature to emulate the noble structure of our race.

But the mind of the philosopher will triumph over the prejudices which prevail with the inconsiderate. In forming an estimate of the mental powers, the instincts, and varied propensities of the Simia race, he will not forget that in despite of the mortified pride of man, they constitute that link of beings which the Creator has appointed to connect the series of animated nature: the intermediate beings between mankind and the brute creation. And instead of regarding this approximation with disgust he will be more reverently disposed to acknowledge with humility the favour of that Omnipotence who has endowed a form so analogous to this race of creatures, with a mind of such surpassing excellence.

In forming a just conclusion of the parallel between the Simiæ and the human race, the true philosopher will not fix as the model of their conformation the Apollo and the Venus of the ancient world; nor the perfections of their living semblances in modern times. Nor, will the intellectual powers of human wisdom, ennobled by those advantages which the arts of refined society can confer, be for a moment placed as the standard of comparison with their intelligence. To appreciate these justly, instead of the most exalted he will be mindful of the lowest state of human nature. The frigid Esquimaux and Kamtschatkadale, the sooty African of the desert, the Boshman Negro,* and the Hottentot of Caffraria will afford comparatives of the human frame: the Arctic Highlander of Greenland's icy regions, the more placid picture of untutored intellect and atheism*; and the savages of Fegee, New Zealand, and their brethren *Anthrophagi*, who people the host of islands to the east of Australasia, the parallel of barbarian intelligence, ferocity, and passions †. He will go further and reflect on the manners of those isolated beings of mankind whom accidental misfortunes have condemned to live from infancy the associates of brutes ‡, and he will then behold in the higher orders of the Simia tribe many analogies that approach quite as nearly to the human frame as the pride of the human race would wish to allow. It has been ordained that man should lift his head in exalted eminence and majesty in mind and form amidst the race of beings subservient to his dominion, but whatever may be the distance of the interval between those beings and man, the Simiæ presents us with the next connecting link in the great chain of nature.

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* Lichstenstein's Travels in Africa. Barrow's Cape of Good Hope, &c.

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* Ross's Voyage of Discovery in search of the North West Passage. *Vide* Arctic Highlands of Baffin's Bay, chap. vii.

† Cook's Voyages. Entrecasteau's Voyage in search of La Peyrouse, &c.

‡ Some well authenticated instances of this kind are on record, and these prove distinctly that the human race nurtured from infancy among beasts, walk not erect, but on the hands as well as feet, become hairy, and have not the power of speech, uttering only certain simple sounds more or less resembling those of the animals among whom they have been reared. Linnæus has collected several instances of this kind in support of his doctrine, that 'man varies by culture.' A youth was found among a horde of wolves in Hesse, in the year 1544; another among bears in Lithuania, in 1661. From the observation of Tulipius, it appears that a boy was found wild among sheep in Ireland; Camerarius speaks of one discovered among oxen, and in 1724, another in the woods of Hanover. A wild girl in Transylvania in 1717, and another in Campania in 1731. It has been also found that almost every attempt to reclaim those miserable beings from a state of wildness have failed: their ferine habits imbibed from infancy appeared most natural to them, and in some instances in despite of every caution to prevent it, they have found means to escape and return to their brute associates. *Linn. Syst. Nat. edit.* 12. *T.* 1. *p.* 28.—*Amoen. Acad. T.* 6. *p.* 65.—*Boerhaav. &c.*

In the Simia race, like that of every other extensive genera in nature, the gradations in descent are many ; transitions not abrupt but gradual, and as the first of the human race is rational man, so is the sagacious and demure Ourang-Outang, as far at least as our present knowledge extends, the first of the Simia tribe, the primate of the brute creation *.

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* Some among the number of our readers who may have chanced to devote a visit to the inspection of that ambiguous object which under the specious appellation of the Mermaid had of late obtained so much celebrity in our metropolis, will now perceive, and not without surprise, the very close analogy that prevails between the head, arms, and trunk of that dried distortion and the Orang-Outang, which is here submitted to their attention.

This "Mermaid *" as it has been denominated, has become an object of no mean attraction to the public mind for some time. The very confident manner in which it was first produced to notice could not fail to ensure its popularity, and the kind complacency with which it was subsequently received, has confirmed its reputation. It has been gazed upon by the admirers of the marvellous, without suspicion, as a wonder of the "vasty deep," at once calculated to remove the doubts of ages, and to confirm beyond the possibility of distrust, the actual existence of such a being as the Mermaid: an anomaly so absurd as an intermediate link of the great chain of nature at once uniting that dignified and important creature man ! with the finny broods of the watery element.

We are not without some apprehension that in endeavouring to explain

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* *Vide* the letter by Dr. Phillips, Missionary at the Cape of Good Hope to the Home Missionary Society of London, &c. &c.

With respect to the Orangs, for it will be perceived as we proceed there are more than one species of these animals, it may be generally observed that our present acquaintance with their race is perhaps most deficient in those particular wherein our greatest curiosity is excited. We now know something of these animals and their history, but much, it must also be confessed, remains involved in ambiguity;

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the true nature of this compound object, although the magnetic point of public curiosity at the time alluded to, it may appear to some readers that we have bestowed much attention upon a subject not so entirely worthy of remark. Such indeed might have been the impression upon our own mind, if we had devoted only a solitary visit to this pretended prodigy, but we have seen it often. We saw it on the morning of its first exposure to public view, and the incongruity of its component materials seemed obviously too glaring to escape discovery. In this conclusion we were, however, much mistaken. In every subsequent visit we invariably found this object of momentous contemplation surrounded by respectable spectators, who appeared to vie with each other in their expressions of admiration at its apparently close assimilation to the human form. Its authenticity was asserted with gravity, and the good-natured acquiescence of our countrymen yielded implicitly to the assurance. Reflection therefore, not upon the object itself, but on the opinions entertained respecting it, have convinced us, that it could not be unworthy of elucidation. The "Mermaid" is at present only a visiting sojourner with us ; its reputation will last long after its removal from the metropolis, and a future æra not more credulous than our own, may deduce an inference from the celebrity it has acquired, in support of the existence of such an anomalous race of beings. A calm investigation of its real nature at the present period, while it is yet possible to compare and ascertain the truth of observation, must therefore be desirable, and it is under this view that we have been induced to enter into that explicit developement of its true character, which it is the design of the present observations to afford.

The great Lord Bacon and the celebrated Dr. Browne did not disdain to employ their time in the dissipation of vulgar errors; Linnæus conceived it nor unworthy of himself to expose the deception of the *seven-headed hydra* of Hamburgh, the value of which, like the present curiosity, and indeed it seems reserved for a future era to complete those enquiries which at the best we are but commencing. At this period it is believed that there are two, or perhaps more distinct species, analogous to the rufous Orang-Outang of the island of Borneo, the subject in particular of the present dissertation, and the history of which is the most developed. There is also another kind as above intimated, the African Oran-Outang, and which, besides its other specifical peculiarities, differs like the human race of Africa in being of a deep black. These are the true Orangs: there is another animal very analogous to them, called the Pongo by some authors; the Pongo of Tiedemann, not of Buffon, and which bears the specific name of Wurmbsii, after its original describer, Wurmbs. It is a native of Batavia, and is known to equal the stature of a man; and though very analogous, it differs from either of the preceding. This animal is however of such rare occurrence that we know very little of its history.

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was before considered almost inestimable. Nor did an eminent Physiologist of the present day hesitate to enter into a minute analysis of the "Monstrous Sea Serpent" of the seas of Scotland, in one of the late volumes of the Transactions of the Royal Society.† We have ourselves in editing the articles of the Natural History department of the Cyclopædia of Dr. Rees, and in various passages of our own publications, exposed the absurdity of

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† "Sea Serpent" of some English naturalists. The spine or back bone of the Basking Shark, Squalus Maximus, which grows to the length of thirty, forty, or fifty feet, the flesh of which had been eaten away by sharks or other ravenous fishes, and the back bone cast ashore. Vide Sir Everard Home's Paper. *Phil. Trans.*

MAMMALOGY.

Whether the animals denominated by Naturalists the Orang-Outangs, that is the rufous species and the black, were known

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Flying Dragons,* Cockatrices,† and Sea Devils,‡ Sea Monks§ and Bishops,|| British White Parrots,¶ and the Mermaids of the Scottish

* "Flying Dragons." Generally formed of the skin of Squalus Squatina, the Angel Shark, *Donovan's British Fishes*, vol. 1, plate 17, sometimes of Raja Clavata, the Thorn-Back, *Donovan's British Fishes*, vol. 2, plate 26, or of Raja Pastinacea, the Sting Ray, distinguished by the formidable serrated spine or spines of its tail, *Donovan's British Fishes*, vol. 5, plate 99, or Raia Rubus, the Rough Ray, *Donovan's British Fishes*, vol. 1, plate 20.

† "Cockatrices." We once received a specimen of this with a declaration of its having been found alive by a fisherman in the English Channel, from whom it was immediately purchased for a few pence. This fact need not be doubted, for it was no other than a small specimen of the Angel Shark, Squalus Squatina, (*Donovan's British Fishes*, vol. 1, plate 17) which the fishermen call the fiddle fish, from the general similitude of its form to the figure of that instrument of music. But subsequently the legs of a cock armed with very formidable spurs had been ingeniously added, upon which it was perched like a bird on a twig of a tree, and the whole form otherwise tortured into a fantastical shape that is usually ascribed to that creature of imagination denominated a dragon. We have seen its similitude among the Chinese emblems, and it may be added that since this fish inhabits most seas, and those of China and Japan amongst others, the Cockatrice alluded to might possibly be another specimen of oriental ingenuity, as well as the "Mermaid" appears to be, upon which we have so fully commented. See Hager's Pantheon Chinoise, and Kaempf. Voy. Japan, &c.

‡ "Sea Devils." These are usually artificial distortions of the different species of the Ray Tribe above-mentioned, bent into various forms by means of wires while recent, and which retaining the form thus given to them, when dry appear like monsters. A formidable object of this kind occurs in "Rariora Musei Besleriani," tab. xv. f. 3. which had long passed for a true Dragon. Lockner, the author of that work, was, however, convinced of its being a fabrication: it was one of the Ray genus, the skin of which is covered with hirsute spines or prickles, and so far as we can judge from the figure of distortion in the plate of that work, the Raia Clavata above-mentioned.

§ "Sea Monks." || "Sea Bishops." These are minutely described in the different editions of Walton, on the authority of Dubravius, &c., and is even figured in Walton's Work, by Hawkins. This also was an artificial distortion of the Angel Shark, Squalus Squatina above-mentioned, with some additional decorations and improvements, the spoils of other fishes.

¶ "British White Parrot." The young of the Common Cuckow; a mere to the ancients, has been much disputed. We think it possible that they were. We must however allow, should this be true, that it is

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Coasts;* and if our observations in the present instance should tend to remove a delusion no less popular, or less generally accredited than either of the preceding, it will, we trust, be deemed of some advantage at the least to the cause of truth.†

It has been advanced in the descriptive details of this ambiguous object, by some authorities of great respectability, and with a degree of confidence that cannot fail to ensure attention, that "Mermaids to the present day have been considered as creatures of imagination." "And although," continues the narration, "some old navigators are stated to have seen, and to have described such an animal, yet their relations have always been received not with doubt only, but also with ridicule. And he who would have asserted that an animal exists in the sea combining the appearance of the human species with that of been as a fish would have readily believed as if he had asserted the existence of the Centaur. Such has been the state of our knowledge of this part of the creation." "But now," continue these writers, "we are happily relieved from any further doubt on the subject, by the exhibition of an animal of this description." Again we

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accidental variety, having the plumage white, instead of rufous with black bars, which is the usual plumage of the young Cuckoo. Vide Donovan's British Birds, vol. 2, plate 41. This white variety was found in Cornwall about six years ago, and strangely puzzled some juvenile Naturalists. It is not unworthy of notice that Aldrovandus far more than a century ago speaks of Demi-Parrots appearing in the West of England: these prove to be the Common Crossbill, Loxia Curvirostra. *Donovan's British Birds*, vol. 2, plate 29.

* "Mermaid" of the Scottish Isles. The animal of which various amusing tales appeared a few years ago. This is a creature pretty closely allied to the Shark Tribe; it is the *Chimera Monstrosa* of Naturalists. Vide *Donovan's British Fishes*, vol. 5, plate 111. This is the "Mermaid" of the North Seas, and it is the details respecting this last-mentioned fish that has been so strangely amalgated with the "Mermaid" of the present day, in order to demonstrate, upon the evidence of both, the existence of such a race of animals. We may confidently add that these two objects, although their histories have been so entirely blended together, are in no manner related to each other.

† More has been written on this subject, by ourselves in the Natural History department of the Cyclopædia of Dr. Rees. See article Dragon, Flying Dragon, &c.

still to the researches of modern travellers, and the Naturalists of the present day that we are indebted almost entirely for those minute

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are told that "though it is much to be regretted that this interesting subject has not been preserved in a more perfect state, a fact is indisputably established that an animal exists which has in the upper part a form similar to the human, combining with the lower part the perfect form of a fish." "The most sceptical mind may be convinced of this fact," it is added, "by examining the animal now submitted to inspection. The Philosopher and the Naturalist need no longer remain in doubt, the more minute the investigation, the more satisfactory must be the result. The object is before our eyes, and we are only left to speculate from its various combinations approaching so nearly to the human species on what may be the habits of the Mermaid." And a concluding observation is deduced, which in our mind might have been spared, as it bears the appearance of an irreverent appeal to the boundless power of the great Author of Creation in the production of such a being, and intimating plainly that this clumsy object of panegyric is an evidence how far the divinity can operate in the works of nature. *Vide the "Manual," and the different testimonies in support of it.*

Those are but a few of the many passages in which the authenticity of the "Mermaid" has been advanced, and, as it will be observed, with such a confident affectation of critical discrimination in point of science as well as anatomical acumen, as may really justify the explicit developement of its character, which it is the design of the present explanation to afford. Relations so ingenious and of a tendency so specious are well calculated to mislead: nor does the danger rest with the present moment, since it is more likely to become an object of delusion from reputation in a future age, when the article shall be removed beyond the search of inspection and enquiry; and we may be besides afraid that the credit of our own country might suffer some abatement in a scientific point of view, should such an article appear hereafter upon the European continent, or in America, accompanied by the many assurances it has already received, of being considered as a genuine production of nature among the British savans.

It is not unworthy of remark in this place, that Professor Lichtenstein of Berlin, from the report of a friend who saw this object while it remained at the Cape of Good Hope, had pronounced it to be surreptitious, although from want of more extensive information he could not venture to decide upon its character; he consoles himself, however, with the reflexion, that should it ever "dare to shew its face in Britain," its intended place of destination, "the imposition would be detected;" and he names some gentle-relations and traits of authentic information which can alone assist us in the developement of their history. The obscure intimations of

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men in this country whom he deemed competent to decide upon its merits. These observations having been widely circulated in the continental papers, can have scarcely failed to excite an expectation which it is believed has not been gratified. Neither those naturalists whom he names, nor any other of our own country, having to our knowledge offered a scientific explanation of the subject, and since it is therefore possible that silence may be interpreted into an acquiescence in its favour, we are inclined to dissipate any such conclusion.

So many circumstances have contributed to raise this object to consideration, that we can scarcely be surprised at the celebrity it had acquired. To say nothing of the curiosity naturally excited by the very considerable sum of money expended by the proprietor in its purchase, we should consider the concurrent testimony of the medical practitioners who saw it at the Cape, and who conceiving that they beheld in it "a much nearer resemblance to the human frame than any of the ape tribe," were induced to conclude it must be an intermediate link between the human race and the tribes of fishes, or, in a single sentence, the compound being so long the theme of popular delusion—"the Mermaid."*

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* A morning's visit to this object of popular curiosity never failed to prove a source of much amusement. We have occasionally, and indeed not very unfrequently met with gentlemen of some consideration in the medical profession discussing the various points of its similitude to the human frame, and lamenting that the proprietor would not permit, at least at the present, the anatomical investigation of its internal structure! After this, it may be naturally conceived that the observations of the visitors generally were decidedly influenced in its favour; and that they afforded rather an evidence of their good-nature than of their discrimination. The manual put into the hands of strangers had boldly pronounced that "the question of its authenticity was at rest," and it was believed, "The philosopher and the naturalist (they were told) could no longer dispute it," and they gave credit to the assurance: "Every doubt (they said) had vanished, and the most sceptical mind must be convinced of the fact by the examination of the object before their eyes." Perhaps it might be heard in whispers, "this is a strange-looking creature,—and so badly preserved;" or perhaps some lady might venture to enquire whether the *true Mermaid ought not to have webs between the fingers*;—but no one seemed to distrust its authen-

past ages while they afford at least to our mind some distant reason for believing that these animals were not unknown to the Greeks and

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It is indeed not the least surprising part of the history of this article, that so many individuals of the medical profession should have endeavoured to assimilate the characters and conformation of the upper portion of this object with the human frame, and thence deduce, as a natural inference, that not being really human it can be no other than the Mermaid. With all due respect for the profession these inferences are erroneous: the conclusions that can lead to this persuasion must be specious and superficial and can be accounted for only upon this ground, that it is not incumbent upon those medical gentlemen, however eminent in their profession, to be con-

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ticity, and the declaration of its being an ugly or a very curious creature very generally concluded the routine of cursory investigation.

The persuasion of the Mermaid having webs between the fingers of the hands is of some antiquity; generally speaking, in the classic ages Mermaids or Sirens were believed to have the body and limbs from the waist upwards in all respects according with the figure of the human female; there existed, however, in the Royal Danish Museum, under the reign of Frederick the Fourth, an object which might have given birth to that idea, for in that example, instead of hands, the short lateral processes denominated arms, and which sprang from each side nearly parallel with the teats, were terminated each in a quinque lobate, or five-lobed fin, in which the bones of five distinct fingers were seen, covered with and united by a common skin, as in the webbed feet of animals.

The celebrity of this object, honoured as it appears with royal countenance, was known throughout Europe, and perhaps, as we have already said, gave rise to an opinion of the "true Mermaids or Sirens" having webs between the fingers of the hands. This curiosity, which John Laurentzen very gravely classes in his "*Museum Regium*" or descriptive catalogue of that museum among the *Fishes!* seems to have been less ambiguously contrived than the Mermaid of our days; it is precisely a lusus, or a distorted object of the human species; the head, shoulders, and breast display the front view, but owing to some monstrosity or contrivance all beneath the breasts were those of the posterior view, exhibiting the lumbar region below the thoracic; the nates, and thighs and legs distinct; but so closely pressed together as to appear united. Thus its general appearance at once suggested the idea of a human subject, which having been separated across the middle, had been so placed again together that from the breast upwards the front view was presented, while all below was that of the posterior. The hands with webbed fingers, which were inserted into the sides, were those most certainly of the Phoca or seal tribe, as appears from their anatomical structure depicted by Laurentzen, and which, like others of the

PLATE LVII.

Romans of the classic age, afford us also, if this be true, an unerring proof of that fondness for the marvellous with which they have too frequently encumbered the truth; and that it is to the spirit of scientific research existing at this enlightened period that we are indebted solely for that accurate degree of information which we now possess respecting them.

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versant with the anatomy of animals as well as man, although some among their number may be extremely well informed in this particular; while, on the contrary, the naturalist, ignorant of the comparative anatomy of the human frame as well as animals, would be little qualified to offer a correct opinion upon the subjects of his study. With due consideration for those gentlemen who have perhaps too superficially and certainly too hastily drawn the conclusion of its being " a genuine Mermaid" from its supposed approximation to the human frame, considered anatomically, we cannot avoid observing that there is no portion whatever of this object, which even under its disguised form, we cannot recognize as distinct from those of the corresponding parts in the human frame: it would be superfluous to specify any part particularly where we pronounce the whole to be distinctly different, and those who would be weak enough to reason upon its analogies might, with far more propriety, pronounce a Mermaid to be a demi-species of the ape tribe than any assimilation to the human frame.

ON THE MAMMIFEROUS PORTION OF THE PRESUMED "MERMAID."

This outré deformity, including both its mammiferous and piscivorous parts, is stated to be two feet ten inches in length, and seven inches and a half across the shoulders. It is enclosed in a bell glass, which precludes

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marine mammalia have the bones of the fingers distinct though they are covered and united by a common skin. We cannot leave this Author without observing, that in this catalogue of *Fishes*, he notices the Sirens of the Northern Seas: the Hafstrambus and Margya of the Islanders; for it is by these terms they affect to discriminate the two Sexes of the Sirens, or as we express it, the Merman and Mermaid: beings, which they affirm to be inhabitants of the North Seas, and to be some times seen on the Shores of the Feroe Isles. From this same writer it may be collected, that the great River Cuama, at the Cape of Good Hope, and also the Japan Seas, has been long celebrated for the production of these beings; but their descriptions are so much at variance, that the admirers of the marvellous may find

The Naturalists of the present day, as we have just before observed, admit two species of the Orang-Outangs, one of which is

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the possibility of taking its dimensiens, but we shall presume from its general appearance this statement may be correct. The upper part of this object consists of the trunk, with the head, breast, shoulders, and arms of a Simia of the Orang tribe, the true Simia of Illiger[*]; the lower part from the breast downwards is that of a fish complete, wanting only the head: and the aspect of the whole at once suggests the idea of an ape, emerging from the mouth of a fish much smaller than can be considered sufficiently capacious to contain it. The comparative disproportion of these objects so combined is in part concealed by the incurvation given to the posterior end of the fish, the tail part of which is turned up laterally or on one side of the body, on the region lying between the place of the anal and the second dorsal fin. A better idea will be conveyed of the disparity of the two material portions of this deformity from the outline of that object sketched at the bottom of the illustrrative miscellaneous plate, No. 59 of the present work.

Looking upon this heterogeneous object the naturalist is at once struck with the total want of knowledge as well as clumsy workmanship of the fabricator. To say little of such an anomalous contradiction to every analogy in nature as such a compound of the mammalia and the piscivorine tribes present, there is no ingenuity of contrivance to palliate the transition; they are abrupt, and at once shew that the body of one animal has been engrafted into another. No small degree of pains we must admit has been bestowed upon the unfortunate biped, the skin of the face having been tortured into a form of peculiar extravagance. We are told that it has been

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abundant reason to affirm, that there must be several species of this tribe of fishes!!! "Sirenem in flumine vasto Cuama ad caput Bonæ Spei, media parte fuisse formæ humanæ capite scilicet rotundo, thoraci sine collo immediaté juncto, auribus, oculis. labris ac dentibus nostris planè similem describit, mammillasque pressas lac emisse candidissimum, alium in Japponiæ Oceano, carne humanâ molli et alba non squamis tectam, esse captam, quoq; memnit, &c. Sect. 3. n. 11.

[*] Considering the great latitude with which the term Simia is sometimes employed, it may not be improper to observe that some modern naturalists, after the example of Professor Illiger, restrict the term to that particular family which comprehends only the two species of Orang-Outangs. The apes, baboons, monkeys, &c. are not Simiæ of these writers but "*Hylobates, Lasiopyga, Cercopithecus, &c.*"

the rufous kind, the subject of our more immediate observation at the present, the other is the Black Orang-Outang, a native of

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apparently dried and preserved by exposure to the sun; that it has been so dried may be correct or otherwise, but this will not so well explain the introduction of the wax-like cement or composition which appears to have been profusely employed in the distension of the skin, and in supplying deficiencies which the skin does not cover; the inflation of the cheeks, the subfalcated nasal organ, the lips and eyes, the palms of the hands, all these have been formed in vain if the design of its Asiatic contriver had really been to deceive the eye or discrimination of an European naturalist. Under the disguise of its distortions we perceive the Orang-Outang, and it is offering some insult to our understandings to affirm "that these distortions prove that the animal had died in great agony." We are directed to observe the head and remark the similarity it bears to that of the human being, we do so, and regardless of those distortions, find that it bears exactly the same similitude to man as the Orang-Outang. That the teeth are those of the Orang-Outang can no more be doubted than that its exterior covering appertains to that animal. From the preposterous manner in which the jaws are advanced in this pretended Mermaid, they suggest at first the possibility of the jaws being those of some larger animal of the ape tribe inserted into the mouth in order to increase the novelty of the spectacle: we cannot pretend to say that something of this kind has not been done, but if it has, we make no doubt it is only the spoils of an older animal of the same species that has been so introduced. The Orang-Outang which Mr. Abel brought alive to London about five years ago, as we have elsewhere observed, was young, but with every allowance for the extension of the skin in stuffing, the animal appears to have been rather larger than the one whose remains we now contemplate could possibly have been; and yet from an inspection of the skeleton-head of Mr. Abel's animal, now in the museum of the College of Surgeons, it appears the teeth are larger in this object before us, an apparent indication at least of a growth more advanced. The foremost of these teeth are conspicuous, such as the four *dentes* or front teeth, the four *laniarii* or canine teeth, and some of the *molares*, but it is difficult to distinguish those which lie behind: they are stated to be twelve in number, i. e. three on each side in both jaws, and this enables us to arrive with tolerable certainty at the age of the animal to which the jaws belonged; it was not younger than the specimen brought to England by Mr. Abel, for in that subject, when it died, only three of the molares had appeared. In the adult animal, as we perceive from the head of another preserved

Africa. Although perfectly distinct from each other, as will be shewn hereafter, the history of these two animals have been so intimately

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in the museum of the College of Surgeons, there are five molares, so that we may take the medium of three molares to indicate the growth of an animal of this kind about two or three years old, a circumstance that sufficiently explains the worn appearance of the incisive teeth, which has been considered as an evidence of its being a full-grown Mermaid!!

The description of the head and the conclusions drawn from it are altogether curious. "The head is round, and forms, particularly behind, a striking similitude to that of man; the sutures cannot be well traced through the integuments, but their existence is sufficiently indicated. The os frontis or forehead has less depth and breadth of outline than the human skull and more than that of the Baboon. The ossa malarum or cheek-bones are extremely high, as in the Hottentot. The eyes are large and prominent. The nose is much more elevated than in the monkey tribe, and its advanced position more so even than in many Hottentots. The upper and lower jaws not so prominent as in the ape, but flat like those of the human species." All this, with the modifications the object has undergone in the process of preservation, may be readily reduced to the Orang-Outang. The ossa malarum or cheek-bones are a striking character, they are really higher in the Orang-Outang than in the Hottentot; upon the magnitude of the "eyes" it is needless to advert, they are nothing more than balls of composition, the size of which as well as prominency must have depended on the pleasure of the fabricating Taxidermist: the same may be also said of the elevation of the nose, and indeed of the appearance of every other feature which would admit of the insertion of the composition.

Of the cervical vertebræ, or joints of the neck, nothing is obvious; these are concealed beneath the wrinkles of the skin and composition, but of the spine nearly the whole dorsal region is distinguishable, and which, with the exception of a little crippling and bending forwards, appears to be remaining in their true position; the four upper dorsal vertebræ are perceptible under their natural covering, the skin of an Orang-Outang; the six lower ones most unnaturally protude to view beneath the skin of the fish, which has been stretched over it, appearing like so many distinct eminences, and which besides disturbing the natural arrangement of the fish-scales by lifting them out of their true position, demonstrate very clearly by their appearance that the skin of the fish had never been adherent naturally to those dorsal vertebræ of the mammiferous animal. Although no more than ten joints of the dorsal region appear, we cannot doubt, from blended by writers, that it will be impossible to render their synonyms so intelligible as many of our readers may desire, without entering at some length into a critical investigation of their history.

the relative proportions of this upper half of the animal, that they amount to twelve, the number we find in the skeleton of the Orang-Outang, for we know of no animal with so small a number of dorsal joints as ten ; the Simia Chinensis has eleven, it is the only instance of less than twelve within our present knowledge, and in several of the ape tribe that number is exceeded. Nothing of the lumbar region or spine below the ribs appear, that portion of the skeleton, if really inserted into the piscivorous clothing of the lower extremity, being entirely concealed from our view ; in the Orang-Outang these amount only to four, so that they occupy but little space : in man the number is five ; in the generality of the Ape tribe seven.

We should not quit this part of our enquiry without adverting to another assertion respecting the vertebral column which is by no means accurate—" the spine or back-bone," it is said, " has much resemblance to that of the human species, the vertebræ being very prominent and attached in the same manner ;" this is not correct : the joints are as dissimilar from those of the human spine with which they have been assimilated, as those of the Orang tribe are from that of man. This presumed similitude may be therefore set at rest ; we may very safely pronounce that it is the spine of an ape, and so far as can be ascertained through its two-fold covering, an ape of the Orang tribe, without any further recourse to anatomical investigation.

The shoulders are high and " fall " we are told " by a gentle declivity, not drawn up as in the Monkey tribe :" we admit that there is a difference in the form of the scapular bones, and their connecting muscles in the different tribes of Simiæ, those of the " Mermaid " are those of the Orang-Outang, which have really some advantages in this respect beyond the Monkey race.

Much stress has been laid upon the presence of the clavicle in the thorax or sternum of the " Mermaid." It has been advanced, that " the existence of clavicles or collar bones renders its resemblance to the human frame the more remarkable, the Baboon being without them," and this observation, so peremptorily advanced, with a specious affectation of scientific accuracy, has found its advocates. Whence an idea so unfounded could have arisen it would be difficult to determine ; it is attributed to the assertion of medical men : those who saw it at the Cape ! We must here observe, that so far from the Baboon being destitute of clavicles, they have them

MAMMALOGY.

Without adverting to the fabulous relations of the "half human beings" of those authors who lived in the darker ages, it should be

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perfectly distinct and resembling those of man; nor is this peculiar to the Baboon[*] tribe, the whole race of Linnæan Simiæ have the same bones, and indeed all animals that have occasion to extend their arms or anterior feet; it is by their assistance that monkeys are enabled to grasp with their fore arms and ascend the branches of trees, and seize with so much adroitness the fruits with their hands; and it is by means of these bones that bats are enabled to maintain the due motion of their wings in the act of flying. There are many quadrupeds in which the clavicles appear only under peculiar modifications, and more or less attached by means of the muscles to the skeleton, but none in which some such provision of nature is wholly wanting, except those who use the anterior part only to assist their direct progressive motion, of which the camel, the goat, the sheep, ox, and horse are prominent examples.

Of the limbs we see only the arms, the lower extremities being enveloped, as before observed, in its piscivorous covering, or more probably removed altogether. There is nothing peculiar in the form of the arms or hands to authorize an assimilation with those of the human race; they are those of the Rufous Orang-Outang; they are longer according to the proportions we may conceive of the entire animal than in the human frame, rather longer than the Black Orang-Outang, and shorter than in the next succeeding species of the Linnæan Simiæ, the Hylobates of Illiger; and beyond these it would be superfluous for various reasons to extend comparisons[†].

As to the "breasts," which we are told "are large and resemble those of a woman, and which, though now small and shrivelled, yet must have been full and prominent when the animal was living," we may also be permitted to say a few words. The comparison, it must be allowed, affords no very handsome compliment to the fair sex; much pains appears to have been taken to distend and enlarge the skin; the mammæ or teats of the breast are composition, and it would not be difficult to say that the same ingre-

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[*] Papio *Brisson,* Cynocephalus, *Illiger,* &c.

[†] In man, as we have elsewhere shown, the hand, when the body stands erect, reaches down to about the middle of the thigh; in the Black Orang-Outang so as to cover the knee-pan, in the Rufous Orang-Outang the ends of the fingers nearly touch the heel; they are still rather longer than the last in Simia Lar and its congeries, the Hylobates of *Illiger.*

PLATE LVII.

premised that when Linnæus entered into such inquiry for his academical paper, *De Anthropomorphis*, a paper read in 1760, and

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dient has been serviceable in distending the dried skin of the breast, or in partially filling-up the cavities of its wrinkles. The Orang-Outang it will be recollected is a corpulent animal, and its skin in consequence lax and very capable of such distension.

In speaking of the mammiferous parts of this pretended prodigy of the ocean we have only further to observe that the skin of the animal where it does appear either naturally adherent to or drawn over the various portions of the fabrication is that of the Orang-Outang ; the general colour tawny brown, inclining to rufous, the natural hue of the hair of this animal, but not of the skin, which is blueish, and which appears therefore to be a tint communicated to the dried skin by means of stains and composition. The face, as in the Orang-Outang, is bare of hair, or only slightly pilose, the colour blueish, and this appearance, as well as some remaining traces of the colour, are obvious in this dried portion of the animal. The black hair on the head of this preserved subject is about two inches long, straight or without any appearance of being frizzled, and has been partly cut off on one side of the head; the presence of such hair has been advanced as an evidence of its near resemblance to the human frame ; this is, however, an error, for it accords, in this particular with the black hair on the head of the Orang-Outang instead*:* and lastly, the reversed hair on the fore-arms although their remains are sparing, are decidedly characteristic of the Orang-Outang, and in addition to its other characters, at once establish its identity with that animal.

PISCIVOROUS PORTION OF THE PRESUMED "MERMAID."

The piscivorous part of this two-fold object is worthy of the curiosity of the speculative enquirer, for it might be reasonably concluded that since so large a portion of the mammiferous animal appeared as the head, the anterior limbs, and nearly the whole thoracic region, as well in front as laterally and behind, that the posterior extremity of this pretended prodigy of the waves would have been deemed sufficiently ample had she terminated like the fabled sirens of the ancients in a fish-like tail, or in two distinct tails like Gratian and the other rebellious giants of the Titanes. But the object before us is much less conformable with classic lore, and presents a new anomaly in the records both of fable and of science ; it is not the tail merely but the whole body of the fish after undergoing decapitation that we now behold appendant to the "Mermaid's" bust ; only that instead inserted in the 6th volume of the Amoenitates Academicæ, he found among writers, in whom he thought he could repose confidence, four

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of exhibiting the branchiostegous rays, or any trace of the gill membrane, the place is covered by two teat-like appendages of the wrinkled flabby bosom. Whether the osseous girdle to which the pectoral fins are usually attached, and which may be considered truly as the clavicular bones of the fish has been allowed to remain, does not appear evident; we should expect upon dissection those bones would be found under the projections denominated the breasts, and yet serving as the base to which the pectoral fins are naturally attached. Upon the dorsal portion of the fish there were no bones to conceal, the skin has been taken off as near the skull as possible, and the animal thrust into it so deeply that this piscivorous clothing of the body reaches up to the fourth vertebral joint from the direct line below the shoulders. It is across this part that the junction of the hairy skin of the Orang-Outang becomes conspicuous, for this dorsal portion has not the advantage of being concealed as it is in front under and between the mammæ or teat-like prominences of the breast.

Thus therefore it will be observed, that it is not the tail merely of the fish, but the whole body of the fish with the exception of the head that constitutes the tail of our present "Mermaid: an unwieldy and inflexible posterior appendage truly for the trunk of such an active being as an ape. But its presence here is useful because we are left by these means in no uncertainty as to the nature of its piscivorous addendum; even in its decapitated state we perceive it to be of the Salmo genus, and at the first glance it would appear the species Salar, our common salmon.

The appearance of the common Salmon is so familiar to every one and so closely resembles the piscivorous portion of the "Mermaid," that few observers will hesitate to admit the similarity. There are, however, some points to be observed which are likely to pass unnoticed, and yet should be considered in the determination of its species. It will indeed demand the eye of an attentive Ichthyologist to decide whether in this object we view the remains of a single species, or in some small degree at least a combination of two different fishes ingeniously consolidated together: let us proceed to examine this—the pectoral, ventral, and dorsal fins accord with those of the common Salmon (Salmo Salar); it is not merely in the number of the rays of which these fins consist that we find this accordance but in their form and relative position, and also in the scaliness of the skin, the form of the scales, their size, and the impression left on the skin, when these are rubbed away, for there are few of the scales remaining. All this different animals that appeared to him very nearly allied to each other, and assimilating in no very remote degree, at least in the general

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demonstrates beyond a doubt that it must be the skin of the common Salmon, into which the trunk of the Orang-Outang has been thrust or placed, and since that fish is universally an inhabitant of all the seas and rivers that lie as far north as the higher habitable latitudes of the Russian, Chinese and Tartarian seas, the sea of Japan, the Black and Caspian seas, the gulf of Persia, and other parts adjacent, there would have been little difficulty in providing a salmon's skin for its investiture, admitting it to be an object of oriental fabrication, and this is beyond a doubt the article appropriated.

It has been advanced that the scaly skin of the "Mermaid" differs from that of all other fishes in having the scales smallest on the back, from whence as they proceed downwards towards the tail they become progressively larger, and are most considerable in size from about the region of the dorsal and anal fins till they approach the tail. Upon this point it may be sufficient to remark, that instead of being an anomalous distinction of the "Mermaid," and consequently one by means of which it may be discriminated from all other fishes, the same appearance is exemplified precisely in the dried skin of the common Salmon.

There are yet, however, a few particulars to be considered before we arrive at any final conclusion respecting the species of the fish before us, and which, in the absence of the head, the most characteristic portion of the species Salar will be found to merit observation.

Linnæus in his *Systema Naturæ* after the example of Artedi, and in conformity with his own description in *Fauna Suecica,* states as a distinctive character of Salmo Salar that the dorsal ray contains 15 rays, the pectoral fin 14, ventral 10, anal 13, and caudal 19; and this with the exception of the number of rays in the anal fin will be found a close approximation to the amount of those in the respective fins of the fish at present under consideration. Linnæus believed that the number of rays in the fins of fishes are so constant that the species may be distinguished by their means. There is certainly a very near accordance in this respect; but, at the same time, it must be confessed that later Ichthyologists have occasionally found them variable, at least in some small degree: various instances, of which have been already shewn by us in our work on Fishes. The conformity is however so obviously striking, that when the deviation is material we may esteem it an indication of a specific difference, even between fishes that may in other respects appear the same or very nearly allied to each other. Thus, when in the fins of the Mermaid, we find an immediate correspondence in this respect with the rays of the common salmon we arrive at appearance, to the human race. One of these is the *Troglodytes* of Bontius, another *Lucifer* of Androvandus, the third *Satyrus* of

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a pretty conclusive evidence that they are of the same species, although in the absence of the head, which if remaining would have confirmed the character of the species beyond a doubt. In the dorsal fin of the "Mermaid" there are 13 rays, in the pectoral 13 rays, in the ventral 10 rays, in the anal 15 rays, and in the tail 18 rays. This statement is made without regard to the shorter rays situated at the anterior part of each fin, of which description there are three at the commencement of the dorsal fin, and five on each side of the longer rays of the tail. We have now before us also an example of the common Salmon as nearly as possible agreeing with the piscivorous portion of the "Mermaid," and which differs from it in no respect whatever, except in having one ray less in the ventral fins, in the relative position of the adipose and anal fins, and in the inferiority in point of size of this anal fin as well as number of the rays of which it is composed.

The objections intimated should be stated fully: the adipose fin appears at the first glance to stand rather further back, or the anal fin to advance rather more forward on the region of the abdomen than in the common Salmon, and seems to suggest the possibility of the fish in question being the Salmo Trutta instead of Salar, but as it conforms so well in other particulars with the first-mentioned species, we apprehend the origin of this deviation must be sought for in some other cause. If we concede that this difference has arisen from the crippled state of the object in drying, there is yet another difficulty to overcome; namely, the comparatively greater magnitude of the anal fin, as well as greater number of rays with which that fin is furnished, for instead of eleven rays, and one shorter at the commencement of the fin, making in the total 13 rays as in the correspondent fin of the Salmon of the same magnitude, we have no less than 15 rays in the anal fin of the "Mermaid." This superior magnitude of the fin, as well as greater number of the rays contained, the Ichthyologist will be aware present some difficulty.

However inconsiderable these objections may in the first view appear to the cursory observer, we may venture to affirm that we shall in vain seek among the numerous species of the Salmo genus for any that will accord with them. The nearest approach presuming on the resemblance of the whole fish after the Salmo Salar, is the Salmo Trutta of Bloch, our common Sea Trout, and this, though not commonly the case, have been known to grow as large as the common Salmon: it does not agree so well as the smaller

Tulipius, and the fourth the *Pigmy* of George Edwards, described in the gleanings of that author's Ornithology. The figures of these

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Salmo Salar in other particulars, or we might conceive the fish in question to be of that species ; Salmo Fario, the common Trout which we have also seen occasionally of considerable dimensions, is yet more remote from the character of the fish under our consideration, and has only 10 rays in the anal fin. If we pursue this enquiry through all the species of the Salmo tribe that have been yet discovered and described, we shall find only three species that have the same number of rays in the anal fin as we perceive in the anal fin of the "Mermaid," these are Salmo Oxyrinchus, a species found in the Mediterranean : Salmo Mæræna, and Salmo Albula, all which differ most decidedly in every other particular, and cannot be reconciled with the present object. The species Eriox has 12 rays in the anal fin, and S. Schæfferi 13, Odoe 11, Wartmanni 14, S. Vimba 14, S. Leucichthys 14, and S. Pidschian 16. These are the nearest approximations, so far as regards the number of rays in the anal fin, but it should be added that they are very distant in other particulars. Perhaps some similitude may be discovered between this fish and Salmo Fredirici of Bloch, a fish that inhabits Surinam, the anal fin of which however contains not less than thirty rays, and does not besides accord in other respects so nearly as to be mistaken for that species.

With an awakened curiosity we have endeavoured to trace the origin of the fish to some other genus, presuming on the possibility of another creature of the finny tribes having contributed this appendage towards the improvement of its appearance. The dorsal fin of many fishes bear a close resemblance to this ambiguous anal fin ; and it must be confessed that it would be labour lost to seek for such a fin in the abdominal region of any other fish, should it really prove to be a dorsal instead of anal fin that has by design usurped the place of the true anal fin of the common Salmon, *Salmo Salar*.

Since these objections arose, an idea has occurred to mind which may assist in unriddling the perplexity. Professor Lichstenstein, a Prussian Naturalist of Berlin, has offered some observations upon the subject in the Prussian State Gazette. He had not seen the "Mermaid," and could form his conclusions only from the descriptions that had been given of it while at the Cape. These observations are nevertheless important, and in particular so far as they relate to the piscivorous portion of this ambiguous object. "To decide upon the fish part, (says the Professor,) we must first know how large the scales are, and whether the fins as they stand are in several animals, as represented by their different authors, appear in the plate that accompanies this paper in the Linnæan Amoenitates Academicæ.

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their natural state or have been arranged by means of scissars. Besides this *no mention is made of an anal fin;* nor is there any trace of it in the drawing." This observation is in itself sufficiently curiously and decidedly to our point. The details into which we have been induced to enter will we hope resolve the doubts of the Professor and of Europe in all other particulars, and with the clue we now possess we shall enter once again with greater certainty upon the subject of the ambiguous fin in question.

In a figure which has been published purporting to be a representation of this "Mermaid," from the pencil of a master of one of his Majesty's ships of war, lying at the Cape of Good Hope, while this prodigy was exhibited in the Cape town, it appears to have a minute anal fin, not exceeding one-seventh part the length of the ventral fins, indeed so small comparatively as to be almost inconspicuous; and, instead of the adipose or rayless fin behind, it has a fin of many rays, which from its aspect we should conclude to be furnished with ramose or branching rays. In another figure correspondent with this, the anal fin is again seen of the same diminutive size, but this has neither an adipose, nor a radiated fin behind. Let us return to the detailed description of this object; we are there informed that "it has three ventral fins." And comparing this remark with the figure in the plate that accompanies the description, we really find in the place of the present single anal fin the representation of no less than three distinct fins as they are described; and there are also three fins on the correspondent dorsal part, instead of the single adipose or rayless fin that now appears. These series of fins occupy the whole space between the vent and tail, while the tail itself instead of being formed like that of the Salmon has two lobes of unequal length, the one being considerably longer than the other.

This promethean difference between the figures of this new found "siren" and the object as it now appears, has led us to imagine that at the time these drawings were taken, the posterior extremity of this prodigy might possibly resemble that of the Shark or Squalus order, having the fins so split as to give it the trilobate form which has been mistaken for three distinct fins above and beneath, and also the lobate figure of the caudal extremity. We cannot hesitate to deny that any such fins did ever appertain naturally to the skin of the Salmo, with which the piscivorous portion of the "Mermaid" is

PLATE LVII.

The first of these, the Troglodytes of Bontius, Linnæus had previously described in his Systema Naturæ, as a species of man, un-

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now combined, it would be contrary to every known analogy in nature, and to every indication we perceive in the object itself. By admitting such an explanation as above suggested, we at once arrive at a probable solution of the appearance which the former designs exhibit. But we have even then to learn by what singular metamorphosis the split caudal fin of one of the squali has become the tail of the common Salmon! and how at the same time the anal fin became of greater magnitude than is usual in that fish.

Having so minutely exemplified the characters of this compound being, it will not be amiss to notice the conclusions that have been deduced as to its habits and manners of life.

"On the lower part of the body (says the writer) it has seven fins, one dorsal, two pectoral, three ventral, and the tail. The two pectoral and two ventral are horizontal, and evidently formed to support the animal when it is in the attitude generally described as seen, combing its hair; and from the number and situation of the fins, together with the assistance which the hands give in swimming, it appears to be completely fitted for making a rapid movement through the water."

Every one is aware that the fins of the Salmon are small in proportion to the magnitude of the body. We are to recollect however that the head is also small, and pointed, and that its fins are therefore of sufficient size and consequently power, to enable it to swim with facility, and even swiftness. But when we are told how happily this anomalous being is adapted for swift movement in the water, the preponderating figure-head must be totally forgotten. This being, if real, would have to carry and move as well forward as in every other direction with a head, arms, and trunk perhaps twenty times the weight of the head the Salmon is ordained to sustain, to say nothing of the pointed form of the latter, which, as before observed, is so well calculated to facilitate its progress. The Salmon we are told is an excellent swimmer: this is very true, but the hapless Orang-Outang engrafted in its skin cannot possibly swim, even for a few seconds. This we know from the evidence of Labardierre, who by singular chance has seen them in the water; and who observes that they turn upon the face and die with suffocation, unless very promptly rescued from their danger. This observation of Labardierre, which is strictly to our purpose, is the more remarkable since many animals of an unweildy form can readily swim as we see exemplified in the Ox, the Bear, and Horse, the Dog, and many other animals; and which completely discountenances the der the appellation of Homo Nocturnus. For the term Orang-Outang which Linnæus applies synonymously to this animal, he refers to

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idea of the writer, that the assistance of the hands is so very advantageous in the act of swimming. Nor is he more fortunate in his conjectures as to the support the creature is likely to derive from the position of these pectoral and ventral fins which it is said are "evidently formed to support, the animal upright when it is in the attitude generally described as seen while combing its hair." This witticism, if really intended as such upon the credulous good nature of our country, is beneath notice; we pass to the simple fact of its real conformation, and at once perceive that instead of being so situated as to bear the fish in an erect position, its organization is designed for horizontal movement: these fins lie flat or horizontally to the body, as in the Salmon, and in all other fishes whose motions are direct. But were it otherwise, of what utility we might inquire would be four little fins of about an inch and a half or rather more in length, to raise and sustain in an erect position an animal two feet ten inches long, with an enormous preponderating head as large as that of a child three or four years of age, and with arms which, when let fall, would reach as low down perhaps as the end of the tail!

The impression upon our own mind is, that we have bestowed already much more discussion upon this deformity than it can in any manner merit; but from a due respect for the good understanding of the many respectable individuals who have been deceived by this fabrication of man, we have been induced to enter upon its analysis with minuteness, and for the same reason shall venture to pursue the inquiry a little further. We shall now speak of the internal as well as the exterior character of the animals compounded in this heterogeneous mass.

The internal character of the Salmon does not preclude the possibility of its suspension for a few moments in an erect position; most fishes possess this power; and with respect to the Salmon in particular, we have often witnessed it in Alpine streams contiguous to the sea, where rocky masses have impeded their progress during the spawning season, as in the Tevi, celebrated by old Drayton, and at the falls of the Glasllyn stream, at Pont Aberglasslyn among the Snowdon mountains; but in all these cases it is obviously the whole power of the fish that is exerted, and not simply the action of the pectoral and ventral fins. The movement in an erect position is an effort in which many fail, their strength proving unequal to the task; and, when they do ascend, it is with a strong vibratory motion of the whole body, not the comparatively feeble exertion of these fins: they even then

Bontius its original describer, the writer upon whose authority he records it as a native of Java; and he also endeavours to shew

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rush up the column of falling water as far as possible and emerge above the surface of the stream as near the shelving and impending edges of the rocks over which the water is precipitated, as their strength will permit. Now, can we seriously for a moment suppose that if any of those fishes, instead of their own small and acutely pointed head, had borne upon what may be termed the clavicular process of its piscivorine body, a trunk, head and arms of this Baboon-like form and overwhelming magnitude they could possibly move with any facility in the aquatic element. What effort, it might be demanded, made by means of fins of such comparative diminutiveness could raise such a being half emergent above the surface of the water, or when so raised sustain it in that posture. To account for this the mammiferous or upper portion of this object is assimilated with the human frame, and hence it is concluded that being furnished with hands it can swiftly emerge to the surface by their aid. But whether ape or human, is immaterial to another more important consideration; namely, by what means are the functions of respiration, and consequently of life to be sustained while it remains under water: since neither ape nor man are qualified to become residents of those aquarian abodes in the bosom of the Ocean, which are described to be the favourite haunts of these marvellous sirens,—those half-human prodigies of the "vasty deep." This is an obvious question, and must be presumed unanswerable. We may perhaps be told they reside so near the surface that they can readily emerge for the benefit of the air; but then another difficulty starts upon us, for if air be so material to their welfare, that state of rest which we call sleep, a rest so indispensable to all nature, can be no less requisite. How is this to be enjoyed, the mammiferous and the piscivorous portions of this heterogenous compound cannot sleep at the same time, for in sleeping the mammiferous part would naturally recline upon the back or side, while the piscivorous portion, conforming to the habits of fishes, would rest when asleep upon the belly, and consequently with the mammiferous portion face downwards. To reconcile this we are to presume upon its position in the water being erect; be it so, there would be then every chance of such a position proving fatal, for when overcome with sleep the Mermaid would naturally fall upon her face and there would be then every certainty of its suffocation and drowning.

In this two-fold article which we are contemplating, our attention is directed to the mammæ or teats: we are told that "it has two breasts which are placed a little lower than those of a woman, and which, though upon the testimony of Pliny, that the same animal was an inhabitant of Ethiopia. He speaks likewise of its extending to Amboina, the Malaccas and Ternate Isles.

small and shrivelled, must have been full and prominent when the animal was living;" and which it is concluded "were destined to suckle the young." The magnitude, of this part whatever may be its composition, is conspicuous. But as we have yet to learn whether this Mermaid be oviparous or viviparous we are unable to determine the importance of those organs to the infant offspring. The Simiæ we know to be viviparous, producing seldom more than one at every birth: the Salmon more prolific, every female individual of this tribe producing many thousands. The result indeed of the most minute inspection will lead to a conclusion that its offspring must be oviparous as in the Salmon, and therefore, if as numerous as the usual produce of that tribe these mammæ must be considered rather as ornamental than useful. There would be at least some difficulty in conceiving these two teats adapted to the purpose of affording nourishment to perhaps a hundred thousand "little Mermaids," and that they so nourish their infant brood must be concluded since "milk" we are gravely told "has been found in the breasts of the Mermaid."

There is not an observation that we have thus far combatted which is not to be found very widely circulated with the sanction of the names of individuals of much respectability who had seen and examined the subject attentively. Those were doubtless cursory observers only, and liable to be deceived; but we have besides to recollect that independently of these, there have been many men of the medical profession who have given the aid of their support, in order to demonstrate this Mermaid's authenticity. This seems incredible, but we are aware that it is true. And it has even been advanced upon such authority, with consummate boldness, that this compound deformity is to undergo an anatomical investigation under the confident expectation of its proving genuine.

As every one will be aware, however deficient may be their knowledge in the science of comparative anatomy, that there must be very remote distinctions between the internal structure of the Salmo and the Simia, it may excite some curiosity to ascertain from the expectation of those who advocate its authenticity, whether they conceive the piscivorous organization to prevail upwards into the trunk or body of the Simia or the abdominal viscera of the mammiferous animal to descend into and amalgamate with the internal organization of the fish; and in either case it would be desirable to know in what manner the destined functions of nature are performed. It appears to us a matter of deep astonishment

PLATE LVII.

The animal which Bontius describes and figures, and which he says he saw alive, bears such a near resemblance to the human form that any one possessed of ordinary reflexion, much less a knowledge of Natural History, or of Anatomy, could for a moment believe such a two-fold organization possible. The fish considered as a Salmo should have the swimming vesicle or bladder communicating with the œsophagus and extending the whole length of the abdomen; the stomach straight and long, and ending in numerous cœcums; ovaries disposed thoughout a considerable extent, and the heart and other organs so essential to the purposes of life, exactly situated in that part of the compound object which is here occupied by the abdominal region and all the viscera of the mammiferous being which protrudes so preposterously from the gape of the decapitated skin. Were it not for this insertion of the abdomen so deeply into the pectoral region of the fish, we might inquire whether it could possess in a two-fold degree the organs of life. For in the thoracic region of the Orang-Outang, which we see in part emerging from the fish skin, we must presume that portion of the animal possessed all the thoracic viscera, as the heart, lungs and other organs of mammiferous animals indispensable to its vitality ; and were it not for the extensive occupation of the pectoral region of the Salmo by the deep insertion of the trunk of the Orang, we might also expect the organs of life peculiar to the piscivorous race in that portion of this compound object.

We can scarcely refrain from expressing some surprise that objections like these, and which appear unanswerable, should have so entirely escaped the observations of those votaries of delusion by whom the authenticity of this pretended Mermaid had been espoused. But perhaps in this we may conclude unjustly: it is possible some few of those most palpable inconsistences have been perceived and that it is among the number of those who have perceived them that we are to seek for those admirers of the marvellous who, unable to reconcile it with any analogies in the course of nature, have ventured to pronounce it a "*lusus naturæ.*"—Really a lusus! —a hybrid offspring between the Ape and Salmon!!!—well even in this extravagance of thought, they are anticipated by the tales of ancient lore; by the poet Oppian more than fifteen centuries ago; for this ancient Greek has fabled in his Halieutics, the amours of the Sargos fish with the goats of the mountains, much in the same manner as we are now to imagine the Baboons of the forest indulge their sportive loves with the finny race in the streams and rivers, or amidst the waves of the briny waters!

that we ought to pause ere we pronounce any distinct opinion on it. It represents a female in the outline of the figure, and countenance

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Σαργοι δ᾽ αἰγείοισι πόθοις ἐπὶ θυμὸν ἔχȣσιν,
αἰγῶν δ᾽ ἱμείρȣσιν, ὀρειαύλοις δε βοτοῖσὶν
ἐκπάγλως χαίρȣσι καὶ ἐ᾽ινάλιοί περ ἐόντες.
᾽Ησέβας ȣ̓κ ἐπίελπτου, ο᾽μὸφρονα φῦλατεκέσδαι
ἀλλήλοις ὀρέων τε πάγȣς χαροπήν τε θαλασσαν.——
ΟΠΠΙΑΝΟΥ, ΑΛΙΕΥΤΙΚΩΝ Δ.

A passage that may be rendered thus:—

"The Sargi have a lively love for the goats: they are the object of their desire. Though they live in the waves they find in the herds of the mountains a charm most difficult to express. What can be more marvellous than this association of animals issuing the one from the sea, the other from the steep and rugged mountains! During the ardent heats of the dog days (when Sirius rises, in the heavens at the set of sun) the shepherds conduct their goats near the sea, (to bathe in the waters purified by exposure to the rays of Phoebus). The Sargi when they hear their bleating; and the stronger voice of the goatherds, though little active at other times, dart in haste to the bank, impelled to the very margin by the impulse of pleasure; caressing with their tails the horns of the goats (the quadruped fair ones) gliding upon their eager tongues and gambolling in immense numbers round them. The shepherds when they see this for the first time are struck with astonishment:"——

Or as imitated with some abatement of literal accuracy, in the flowing numbers of the poet,

The Sargo scorns the natural embrace,
Admires the Goat and courts the bearded race,
The scented females of the mountains craves;
Himself a native of th' inconstant waves,

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[*] Σαργοι. The Sargos or Sargus: the Sargo of the modern Italians, believed to be the Sparus auratus or lunulated Gilt head, and not Perca labrax (the Basse) as considered by Jones. Vide *Donovan's British Fishes.*

perfectly human, and deviating much less from the symmetry of a well-proportioned European than a negro. Since this representation

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Strange that the hills and briny seas should share
A lover, in a kind consenting pair." *Jones Halieut,* Book iv.

OBSERVATIONS IN CONCLUSION UPON THIS PRESUMED "MERMAID."

A few remarks further and we shall conclude. The history of this very absurd deformity is, that it was found on board a native vessel in the archipelago of the Malaccas; and that a Dutch vessel carried it to Batavia, where it was purchased at a very considerable price. This price is stated to be 5,000 dollars, and it is added further that 10,000 dollars had been since offered for this presumed inestimable article, and had been refused. We are besides told, that "uncultivated as the minds were of those from whose hands the creature was obtained, its resemblance to the human form created an instinctive awe, the pagans beholding with astonishment its amalgamation of forms." All this may be, and we have no doubt its fabricator beheld with no less pleasure than the pagans did surprise, the labours of his hands as the great work of transformation was proceeding;—when, like another Bacchus, as the fabler Ovid relates of the mariners changed to fishes, he transformed a being of the forest into a finny monster of the sea:

> Primusque Medon nigrescere pinnis
> Corpore depresso, et spinæ curvamene flecti
> Incipit. *Ovid Metam.*

From all that has been advanced by us upon the subject, this conclusion must be obvious, that we deem the "Mermaid" a very gross deception, and rest so entirely and distinctly satisfied in this persuasion that we do not regard it as a matter of opinion but of certainty. That imposition was manifestly the object of its Asiatic inventor remains unquestionable; there are, however, circumstances connected with its history, which seem at least to render it probable that it was originally intended as an imposition on Asiatic credulity rather than European discrimination, although this has been, and to a very great extent, the result eventually. We are told that the pagans into whose hands this object fell, are worshippers of the Mermaid; this observation, if we mistake not, will tend to elucidate the mystery and object the fabricator had in view: there is no such worship among the pagans of our days as that of the Mermaid; two thousand years have passed away was deemed by Linnæus deserving of his reliance, we cannot be surprised that he has placed it in his system as a species of the human

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since the Syrian deity here alluded to has lost all reputation as a divinity; this supposed Mermaid, the object of Hindoo mythology and devotion, is not the Dercete, or Syrian Siren, of Lucian, Pliny, and Diodorus Siculus, whom offended Venus is feigned to have punished by transforming her into a fish; it is no other than one of the transformations, or Avateras, of Vishnu, an attribute of Brahma personified: an allegorical type of the abatement of the waters of the Deluge and renovation of the earth in obedience to the fiat of the supreme power after that catastrophe. Nor would it be very difficult to prove from the most ancient remains of the Hindu as well as the Chinese records of Yu,* that although the Hindoos believe in several renovations of the earth, that which is implied in this instance by the Avatera of the fish, with Vishnu emerging from its mouth, is precisely that of the Mosaic writings. This Avatera is usually represented in ancient statues, sculptures, paintings and other emblems of the Hindoo Temples, or in the books of their mythology, as a human figure with several heads and arms rising out of the mouth of a fish, the fish erect or elevated on its bending tail, more or less emergent from the waters, and bearing above the waters' surface the figure alluded to, in the same manner as the bust of the Orang-Outang is here seen rising from the mouth (or rather the decapitated body) of a Salmon. The chief objection to this idea seems to be, that in this deformity instead of the human figure we have the ape. May not this be an allusion to the "Mighty Ape" Hanuman, an imaginary power of no small consideration in Hindu mythology? According to their ancient legends, although not immediately the favoured Rama in the incarnation of Vishnu, he was his chief general; Hanuman, among other miraculous exploits, is allegorically reputed to have built a bridge from the continent of India to the island of Ceylon, to attack the evil Ravana, an allusion it has been imagined to the power of Hanuman over the waters of the deluge, and of which power this effigy may be an emblem. There are other mythological figures among the Hindus in which beings of the land are seen rising out of the mouths of fishes, as for example, in the Nereid wives of the serpent Kaliya, but these are handsome beings of the human form, and

* *Yu* of the Chinese, we presume the same as the *Huw* of the ancient Britons, both implying, it is believed, the patriarch Noah, and having consequently a reference to the Mosaic deluge.

race, after the varieties which he denominates "*Monstrosus.*" The reference made by Linnæus to the Roman Naturalist, (Plin. 5. c. 8.)

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so far dissimilar from the bust of our present Mermaid. We are, therefore, upon the whole, inclined to consider this object as a type of some attribute in one of the incarnations of Vishnu, and which for this reason commanded the veneration of the Hindu mariners; a tutelary idol perhaps kept on board to ensure the safety of the vessel against storms and shipwreck, or some spoliation of one of the Hindu sanctuaries.

Should these conjectures prove correct, and we are much inclined to think them so, we may at once perceive the cause of that reverence which the Indians were observed to offer to this compound idol, and which the ignorant Dutchman, by whom it was purchased in the first instance, might have supposed to have been devoted to it as a "Mermaid." These suggestions, arising from the circumstances related, and the known superstitions of Asiatics generally, as well as the Hindus in particular, appear to be at least probable. The Hindus would be naturally disinclined to part with such a representative allusion to an Avalara, or incarnation of Vishnu, and to which, as mariners, they might attach some additional superstitious notions, at the same time that they were wily enough to take advantage of that eagerness which they might have perceived in the European speculator to possess it, for this must have been apparent in any one who could for a moment seriously entertain a treaty for the purchase of an object so preposterous, an earnestness that could only become more obvious by the payment of the enormous price at which these devotees were disposed to sell their venerated idol. Unless in those presumed circumstances, or some other of the like tendency, we are able to discover an adequate apology for this fabrication and the many errors that have resulted from it, we must regard the whole as a complete deception upon the credulity of the world, and as one the most deserving of exposure.

We have alluded generally in one of the foregoing passages to certain imaginary monsters, the pretended inhabitants of the waves; the details of which are to be found in the ancient books of the people of Japan and China. Such persuasions were no doubt common to every country in the first ages of the world, but of the superstitious belief of those people in this respect in particular, we were wholly ignorant in Europe till very lately, when many of their writings happened to have been introduced, and are now in the hands of scientific men; it will not be therefore amiss to add, that though some of the literati of those countries consider those anomalous relations to be chimerical, the people generally, as in every other part of the world, be-proves nothing in support of the veracity of Bontius, and must be regarded rather as a justification of himself in having employed the

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lieve that such beings have existence in the great depository of wonders, the "depths of waters." They have like ourselves details of Mermen and Mermaids, and admitting as they do, moreover, the being and presidence of the genii of the elements, they can readily believe in the existence of such monsters. Every one is besides aware of the implicit faith attached by those people to the histories and traditions they have received from their forefathers, so that this belief may be considered almost universal.

From a very extensive collection of the learning of those countries now before us, we could select many objects of a similar nature and indeed of very singular curiosity. Among the number we observe two that are precisely applicable, and have made choice of those for the purpose of our present illustration; the copies of these are to be found in our explanatory plate. The upper half of both resemble the human figure, the lower part in both are as truly indicative of the finny tribe; the first from its more robust and muscular form is obviously intended for the male; it is, no doubt, the bust of an Orang-Outang, with the hair of the head set up in the form of fin-like appendages, and from the breast downwards the figure is a fish, the latter apparently a species of the Sparus tribe. The other represents a female of more graceful form and is probably a preparation of the bust of a human subject inserted into the skin of a fish, perhaps also of the Sparus tribe.* These are copies by the Japanese artists from very ancient books, and probably embody the superstitious persuasions of those ancient people during the space of four thousand years.—The belief in such anomalous productions is certainly very ancient in the world, and was by no means confined to those remote parts of Asia. A figure altogether similar to these, but with the bust of a ram instead of an ape, and the lower half of a fish-like form, occurs upon an ancient piece of sculpture in the museum of Sens. This is a work of art attributed to a period much preceding the Christian era; the subject is mythological—the Taurine Diana riding in her chariot over the waves: the object adverted to appears in the uplifted hand of Thalassa, the nymph by which the sea is personified, and who appears seated on the waves in the lower part of the sculpture.

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* It is worthy of remark that the Σαργοι of the Greeks, commemorated in the fable of Oppian for their pretended affection for the mountain goats, appertain to the Sparus genus; and the piscivorous portion of those compound beings, according to the ancient notions of the people of Japan and China, seems to be of the same

term Troglodytæ.* It may therefore be concluded that Linnæus has left us upon the authority of Bontius principally, a supposed species of man, to which he assigns the name of Homo Troglodytes, and thus it stands in the latest memorial of the labours of that celebrated Naturalist, the twelfth edition of Systema Naturæ.

It is manifestly of the very first importance to the cause of science, to ascertain the truth of this authority. This is not entirely in our power, but if our observations tend to place it in a progressive course of investigation, the science will derive at least some small advantage from our inquiry. The general impression is that this animal of Bontius has no other basis than the exaggerated relations of an Orang-Outang, but which of these two species we are left in doubt, because those writers who are the most forward to condemn Linnæus for yielding credence to these fictions or exaggerations, as they are termed, are the very authors who have confounded as the same species the two animals so dissimilar to each other as the rufous and the Black Orang-Outangs, or as sometimes called the Chimpanzee.*

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* Troglodytæ specus excavant. Hæ illis domus ; victus serpentium carnes ; stridorque non vox : adeo sermonis commercio carent.—The Troglodytes of Pliny are one of the many tribes of men who were said in his time to inhabit Ethiopia, and of whom Diodorus Siculus gives some description. In those ages the Ethiopians and the Egyptians, as it is related by the classic writers, subsisted according to their sect upon particular kinds of food, and it is asserted that these Troglodytes fed on the flesh of serpents. But fruits, and not serpents, are the natural food of the Orang-Outangs: neither do they dig caves for their dwellings, so far as we know they live in trees. The want of voice or speech for conversation, as in man, is the only probable indication of their alliance with the Orangs ; and this, if so, must be from its habitat the Black Orang, and not the kind found at Java and Amboina.

genus, if not the same species. Do we in this instance recognize a trait of some prevailing fable of the remotest ages, the origin of which is lost, but of which this trait remains? The coincidence at least is singular. Can this be the "sacred fish" of the Phœnicians, and of the pelasgiac world?

Professor Gmelin in his edition of the Linnæan writings has endeavoured, but ineffectually, to distinguish the two last-mentioned animals, at the same time that he rejects the Linnæan Homo Troglodytes as fabulous, and conceiving it must have originated in an exaggerated detail of the rufous Orang-Outang has reduced it as a synonym to that species. This being in direct contradiction to the latest conclusion of Linnæus, it may not be amiss to observe that in this very correction Gmelin has totally lost sight of his original, and with it we are as well persuaded the accuracy of that original. Thus Gmelin makes this Homo Troglodytes of Linnæus the rufous Orang-Outang, without observing that Linnæus tells us after Bontius that his animal is white instead of rufous, and that it is clothed with whitish curled or wavy white down, except on the face, hands, and feet, which are bare, and the hair of the head, which is longer and disposed in curls, as on the human head. This cannot be in any manner reconciled with the rufous Orang-Outang, and if it could there is another difficulty still greater than either to overcome, namely, the comparative length of the arms: for these, as they appear in the figure given by Bontius, are of the same length as in the human frame. Linnæus, however, tells us more explicitly that when the animal stands erect, the ends of the fingers reach to the knee, adding at the same time, that in the human frame the finger ends, when the arm hangs down, reach only to the middle of the thigh, and this we know are the usual proportions. If this observation upon the length of the arm in the animal of Bontius be correct, it at once affords a distinction that removes it from the rufous Orang-Outang, as will appear by comparing the specific character which we have assigned to the latter animal "*brachiis longissimis*," for instead of being of a moderate length, as in the human frame, when the animal stands erect with the arms down, the ends of the fingers very nearly touch the heel: this we have fully ascertained to be the case in the animal when living, as well as from the skeleton, and the stuffed skin in the Museum of the College of Surgeons. Were it not for the much shorter length of the arm in this animal of Bontius, we should almost conclude that the white variety, as it is termed, of Simia Lar (the Gibbon or Long-Armed Ape) must be the animal intended; but we have been so far fortunate as to have seen these creatures,* and can venture to say that in these, as in the rufous Orang-Outang, the greater length of the arm forbid that supposition, and we must conclude with believing if it be not a very incorrect delineation of the white Lar, or what is far more difficult to conceive, a white *lusus* of the Black Orang-Outang of Africa, (with which its more moderate length of arm would correspond*) it may be an animal existing in those islands of the Indian seas, unknown at present to any Naturalist. Had not the comparatively length of the arm been so distinctly stated, its appearance in other respects might have induced a conclusion of its being a lusus of the human frame: Linnæus tells us it is about half the size of the human adult, which corresponds pretty well with the stature of Simia Lar, the height of which is about three feet, and which also inhabits India.

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* In the general Zoology of Dr. Shaw, the difficulty of discriminating the two species is overcome by forming an English specific character, in which the description of both is amalgamated; and the general history that accompanies his description presents us with a curious *mélange* of the manners of both, as ingeniously interwoven together. The nomenclature of the singular object thus compounded is no less extraordinary, for its author apparently vaccillating in opinion as to which of the two Linnæan names ought with most propriety to be assigned to it, has appropriated both: he names it specifically *Homo Troglodytes* and *Simia Satyrus*, thus constituting of the same being a man and a monkey! *Vide Gen. Zool. vol.* 1. *p.* 3,

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* This we have determined from the skeleton in the Museum of the College of Surgeons, the particulars of which will appear hereafter

In the Gmelinian edition of the Linnæan system the term Homo is confined to the species of sapiens, rational man and his varieties. The synonyms of the Linnæan Homo Troglodytes is assigned to the Orang-Outang, under the appellation of Simia Satyrus, and to increase the perplexity, the name of Troglodytes is given as a specific name to another animal, the Black Orang-Outang, or Chimpanzee. Nothing can be more confused than this, or more contrary to the intention of Linnæus. It is perfectly clear that whatever the Orang-Outang of Bontius may prove to be, and whether we place it as a Homo, or a Simia, it is distinct from the rufous Orang-Outang. The rufous Orang-Outang Linnæus describes in the twelfth edition of Systema Naturæ, under the name of Simia Satyrus. He does not unite it as Gmelin has since done with Homo Troglodytes; the latter Linnæus leaves in his genus Homo; while the Rufous Orang-Outang is referred by him to the Simia genus, under the appellation of Simia Satyrus. Linnæus was led to consider, and certainly without sufficient information, that the Black Orang-Outang of Africa might possibly be a variety of his Satyrus: he places it as such, *var β Satyrus Indicus* of Tulipius, at the same time that he suggests a doubt whether it may not be another species: he observes particularly that the abdomen of the latter is ventricose and glabrous, and enquires whether it may not be the other sex of the Rufous Orang-Outang. *An β Species distincta, quam vide Amoen. Acad. 6. p. 69. t. 76. f. 3. certe β abdomine ventricoso glabro differt; an sexu?*

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* In the Leverian Museum; the white variety was purchased for the Imperial Cabinet at Vienna.

This caution of Linnæus was not superfluous, we are now assured from our better knowledge of the two animals in a living state, as well as from their anatomical conformations, that they are specifically different; and if Gmelin has been in error when he referred the ambiguous synonym of Homo Troglodytes to Simia Satyrus, he was certainly right in separating the Black from the Rufous kind. Linnæus had previously to this, (in *Amoen. Acad.)* defined these two animals differently from the descriptions we find in the last edition of his Systema Naturæ, for the Rufous Orang-Outang he there denominates Pygmæus, and adds the specific character which was subsequently given by him to Simia Satyrus; and under the name of Satyrus he gives in *(Amoen. Acad.)* his description of the Black Orang Satyrus β *(Satyrus Indicus.)*

It will hence upon the whole appear that much confusion has prevailed among authors respecting these important animals: that Linnæus was himself in doubt; and that Gmelin and other later Naturalists have been too precipitate in their conclusions. We are now entirely assured that these two animals are perfectly distinct from each other. The animal intended by Bontius is much less certain. From every attention to the subject, we apprehend it must appear that for the present it is better to allow the name Troglodytes to remain unappropriated till we can be assured with greater certainty that we know the object Bontius has described and Linnæus had intended *. For the Rufous Ourang-Outang we would retain the name Satyrus, because it has now become known by that appellation, and for the greater perspicuity would assign some other epithet to the Black kind instead of Troglodytes. We propose also to appropriate a new specific character to each, founded upon peculiarities which our own observations have afforded, and which it is presumed will be found sufficiently explicit to identify in future two animals, which, though perfectly distinct, have been hitherto in a great measure confounded. The Rufous Orang-Outang we should distinguish as

SIMIA SATYRUS : *ecaudata, ferruginea : auriculis parvis : brachiis longissimis, lacertorum pilis reversis : natibus tectis.*

The Black Orang-Outang as

SIMIA PANN : *ecaudata, nigra : auriculis magnis ; brachiis subelongatis, lacertorum pilis reversis : natibus tectis.*

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* In a very valuable paper upon the Zoology of Sumatra, by Sir Thomas Stamford Raffles, inserted in one of the last volumes of the Linnæan Transactions, we find certain observations relative to this important tribe of animals, that may encourage some hopes of a more satisfactory solution of these doubts than naturalists possess at present. Sir T. S. Raffles speaks

Both these animals it will hence be perceived are tailless; the difference in colour is material; the Simia Satyrus being ferruginous varying to rufous, Simia Pann black and somewhat glossy. The ears of S. Satyrus are small in comparison with those of man, to which they bear a close resemblance; in S. Pann the ears are ample, spreading, and larger in proportion than in the human frame. The comparative length of the arms in those two animals offers another very important distinction; in Simia Satyrus when the animal stands erect with the arms down, the tips of the fingers usually reach to the ankle, and from the several skeletons we have seen in the College of Surgeons, London, in the Museum of Anatomy in the Jardin des Plantes in Paris, and in the collection of

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of a white variety of the Siamang of the Malays, and of a dirty yellowish white kind of Simia Lar, both of which, were the arms shorter, might be reconciled in some degree to the Homo Troglodytes of Linnæus. But besides these, we collect from this Zoological dissertation that there is certainly another race of Orang-Outangs with which we are at present unacquainted. "Native information (says Sir T. S. Raffles) gives reason to believe that it *(Simia Satyrus)* exists also in Sumatra (as well as Borneo). It is there known by the name of Orang-Pandeck (Pigmy), and the accounts agree exactly with the Orang-Outang of Borneo. It is frequently confounded with the Orang Kubu and Orang Gugu, which, though often the subject of fable and exaggeration, *appear to exist on the island as a race of men almost as hairy and wild as the real Orang-Utan, v.* 13. *p.* 1. *p.* 241." It is probably in this last mentioned race, and not in the Rufous Orang-Outang of Borneo, or the Black species of Angola, that future naturalists may identify the true Homo Troglodytes of Linnæus, and the animal of Bontius upon the authority of which he has described it. The literal meaning of the term Orang-Outang in the language of the Malays is a wild man, from Orang wild or savage, and Outan man. And since, as it now appears, three, if not a greater number of different animals may have been confounded under that name, Bontius may have been correct according to his information; the error lies with subsequent authorities, who have supposed that name peculiar to the animal now distinguished by the appellation of Simia Satyrus.

Mr. Brooks, as well as other preparations, it appears that the animal could, if so disposed, almost, if not entirely, touch his heel with the ends of his fingers while standing erect; in S. Pann the hand reaches to the knee, and rather lower, for the animal, judging by the skeleton, can cover the knee with the palm or hollow of its hand. The reversed direction of the hair upon the arms in S. Satyrus is not peculiar to that species, it is the same in both, and in both the haunches are covered with hair, but in S. Satyrus the back of the hands is rather hairy, in the other bare. Besides that the hair of one is black and the other ferruginous, that of the Black kind is shorter, of a finer texture, and disposed more closely on the body in the specimens of Simia Pann than in Simia Satyrus; but in this respect it is probable that both may vary at different periods of their growth, or from some accidental causes, such as a different temperature of climate, or variation in the health of the animal. The variation in this respect was considerable in Simia Satyrus, which we saw in London in the year 1818. On its first arrival in England the hair was longer than it was sometime afterwards, but the middle of the breast and belly, which was at first naked, became hairy nearly about the same time that the other parts of the fur had become shorter. We have observed also, that the abdomen of the Black Oran-Outang (our Simia Pann and Simia Satyrus of Linnæus) is sometimes covered with hair, a circumstance that renders the expression of Linnæus "*abdomine ventricoso glabro*:" and "*dorso et humeris pilosis reliquo corpore glabro*" of Blumenbach nugatory in characterizing the species, and which for this reason is not mentioned in the specific character we have assigned to it. While we are speaking of its fur we ought to observe that it is shorter and somewhat more sparingly diffused in the specimen preserved in the Museum of Natural History at Paris than in the example preserved in the College of Surgeons in London, the tints more foxy, and the hair upon the head less inclining to blackness; the skin also in the Parisian specimen appeared to be of a much lighter tint than in the specimen preserved in England, the tint of which was a dark blueish lead or iron grey. Through the kindness of M. Professeur Dufresne we saw an original drawing of this animal that had been taken from the living subject, and had also the opportunity of comparing it with the preserved specimen, which was taken out of its case for the purpose, and the result of this investigation assured us that the colour of the skin in the Parisian specimen when alive, was considerably paler and more inclining to a ruddy tint than in our example.

We believe that the differences between the two kinds of Orang Outangs, the Rufous and the Black, have been so far distinctly pointed out by us that they cannot easily be mistaken. Besides the manifest difference in the colours, the great length of the arms in the former, which reach nearly to the instep, while in the latter they extend only so far as to cover the knees, is a character at once decisive. But there are yet two other synonymous references among authors to the works of Buffon which deserve some consideration, lest these two acknowledged species be multiplied into four.

We allude to the *Jocko* and the *Jocko de la petite espéce* of that author. Whether these have been so accurately discriminated as the present state of science may demand, we must admit, appears a little doubtful: the modern French writers conclude that the *Jocko de la petite espéce* of Buffon is of the same species as the rufous kind.

Virey observes that it is the animal represented in Buffon's Supplement, tom vii. plate 1. adding at the same time that it is also the animal represented by G. Edwards (in his Gleanings), by Vosmaer, Allamand, and Camper, and which is described by Tilesius in the Supplement of Captain Krusenstern. This appears probable, and is we apprehend correct, but we cannot, in the absence of the animal described by Buffon, or at least of its remains, speak decisively upon this subject; we understand the specimen in the Parisian Museum is gone to decay, that of Edwards, once preserved in the British Museum, exists no longer, and the absence of the third joint of the great toe, and of the nail of that toe in the specimen of the Rufous Orang-Outang in our College of Surgeons, appears to deserve mature consideration in forming a correct opinion on the subject.

Of the other animal, the Jocko, or Pongo, of Buffon, we may speak more fully. This is a well-known figure in the work of that author, which cannot easily escape observation from the general similitude of the representation to the human form. It stands erect with a staff in his hand, the body and limbs covered with long hair, but the face is bare, and in all respects resembles that of a man with a ruddy complexion. The appearance of this creature, designated by the name of Jocko, or Pongo, suggests the probability of its being designed for a larger or an adult growth of the Rufous Orang-Outang; Mons. Cuvier, however, observes that it is the Chimpanzee, very badly represented, the individual specimen described by Buffon still remaining, as the writer observes, in the Paris Museum; but the same object is better represented, it is added, by Lecat, under the name of Quimpésee, and it is also that which Audebert has given under the name of Pongo.

PLATE LVII.

Having introduced the name of Pongo to our readers, it may not be superfluous to observe, that the true Pongo was supposed to be still another animal, very different from that of Buffon. It is described by Wurmbs, and subsequently by Tiedemann, under the name of Pongo Wurmbsii, and is described as being of the stature of a man; with some writers it constitutes a family or genus distinct from the Orang-Outangs. Mons. Cuvier, in his Regne Animal, adopts the genus Pongo, which he places after the Mandrills, observing that the only species at present known is that described by Wurmbs. Professor Illiger of Berlin is of a different opinion; in his Prodromus the Pongo does not constitute a different genus, it is allied to Simia Inuus, as a species of his genus Cynocephalus; and lastly, it should be observed, that in a paper read some time ago in the Academy of Sciences at Paris, it appears that Mons. Cuvier has changed his former conclusions, for he now considers the Pongo of Wurmbs to be no other than the adult of the Rufous Orang-Outang, and concludes that those smaller animals of the Rufous kind which have been hitherto brought alive to Europe, are only the young of that species. This last opinion is confirmed in our mind by a critical examination of the skeleton of the Pongo Wurmbsii in the Museum of Anatomy in Paris, and a due comparison of that skeleton with those of the rufous and black Orang-Outang preserved in the same museum, all which, by the favour of Baron Cuvier, were taken down from their cases and placed together for the purpose of our inspection. We found that the skeleton of the Pongo differs in no respect except in magnitude from that of the rufous Orang-Outang; the length of the arms, one of the most essential characters of the species in our opinion, is precisely the same: in both the hand would reach so low down the tibia that the end of the fingers would without difficulty touch the heel; in the greater elevation or prominence of the sutures of the skull there is a material difference between the Pongo and the younger animal; the skull of the latter is much smoother, and exhibits only a very slight indication of the sutural elevations or ridges which are conspicuous in the larger animal, but which when considered with due attention demonstrate only the great increase in growth and age of the animal, as we observe in various other animals. The most striking difference, as it appeared to us, was the more perfect formation of the great toes, which both in the Pongo and in the rufous Orang Outang has three joints, while in in our example in the College of Surgeons there are only two, the third being wanting in the skeleton, and which was indeed sufficiently apparent in the living animal. We observed likewise, that in the preserved skin of the Rufous Orang-Outang in the Paris museum, the nails of the great toes were perfectly well-formed, of a hard consistency and larger than the rest. In the example to which we have so frequently alluded, there is no indication whatever of any nail upon the great toe. Is this accidental? or is it any indication of another species? Or can it possibly be any criterion of the sexes? This latter idea seems scarcely admissable, but it may not be unworthy of remark that the specimen in Paris was a female, that in England of the male sex.

Before any opportunity had occurred to us of examining the skeleton of the Pongo, we were pretty well assured that in the adult state our species must be of magnitude far superior to the example we had seen alive. This idea was founded upon a comparison of the skull of that skeleton with another skull of comparatively gigantic size, very lately received from Borneo and preserved in the College of Surgeons, London. This skull appeared to be of the same species, allowing only for the progressive transitions in its form, which would take place as the animal should increase in size and age. We are now persuaded it is of the same species, and may serve as a further evidence that in the adult state the Rufous Orang-Outang is an animal of commanding stature. The skeleton of the Pongo in the Museum of Paris, and which from every indication we are inclined to admit to be of the same species, when placed by the side of a man of rather low stature, appeared very little inferior either in height or dimensions.

The capture of the Orang-Outang is a circumstance of rare occurrence. If they exist in any considerable numbers, and it is believed that they are numerous, they reside together in society, and their haunts are the depths of the most secluded forests, among rocks and mountains the most difficult of access. They are also represented to be so intelligent and vigilant in avoiding every kind of snare, and so powerfully vigorous in their defence, when in danger or likely to be overcome, that they can never be taken unless when very young. The adult Orang-Outang, with a stick or branch of a tree in its hands, defends itself till it is killed, or scaling the rocks hurls stones down upon its agressors, never yielding to any force but in death. In close attacks, when disarmed, it must be no less formidable, for then, opposing its antagonist with main strength and casting it to the earth, it seizes upon him with its teeth, and while holding him firmly down at arms length, can with perfect ease and safety tear him to pieces. In such a contest an unarmed man must be subdued by the Orang-Outang. The Rufous Orang-Outang, deducing our conclusions from the Pongo before-mentioned, and which from every indication appears to have arrived at full maturity, is not inferior in magnitude to the smallest race of mankind, and so powerful in its construction as to impress us fully with the persuasion that when full-grown this animal must prove a truly formidable creature. This explains the reason of the Orang-Outang being so rarely seen alive; it is only in the young state that they can be taken, and even then they are so impatient of captivity that they will not bear the least appearance of confinement, so that the difficulty of rearing them becomes perhaps insurmountable. Sir T. S. Raffles not long since sent one alive from Borneo to the menagerie of the East India Company at Calcutta as a rarity, but whether this will survive to maturity appears to be very doubtful. Mr. Abel speaks of the people flocking in crowds to see that which he had alive, and which was afterwards brought alive to England, and it appears in general to be as little known in India as in Europe. Even their remains are very rare in our museum.

There is no example of either kind of the Orang-Outang in the British Museum, we understand, at present. The College of Surgeons in London possesses the stuffed skins of both kinds, the Rufous and the Black, and also the skeletons of both. These animals were originally presented to Sir Everard Home, who very humanely, in order to avoid the necessity of putting these unfortunate captives to death, consigned them to the care of Mr. Cross, the proprietor of the Exeter Change menagerie, till they died, and then enriched the museum of the college with their preserved remains. In the same Institution there is also another of the Rufous kind in spirits and another in an unprepared state, having the bones and flesh yet undeveloped, and finally, the skull of one other, very considerably larger, of which we have just spoken. In the anatomical museum of Mr. Brooks, professor of surgery, in Blenheim Street, we meet with the skeleton of other examples, and another of the Black kind in the possession of Mr. Walker, an eminent surgeon in London.

We also saw, some years ago, an extremely well-preserved specimen of the Black Orang-Outang in the possession of Mr. Fichtel, a continental naturalist, who had purchased it in this country from Mr. Stachbury for the Imperial Cabinet at Vienna, at the price of fifty guineas, an original drawing of which, taken by the permission of Mr. Fichtel is now in our possession, as well as a drawing of the same subject by an artist of the name of Mills, taken in 1800, through the favour of Mr. Stachbury, Jun. And besides those and our sketches from the living animals since seen in London, we have been allowed, through the kindness of Mr. Cross, to have copies of the casts taken from both animals immediately after death. These authorities have been been compared, together with the different interesting examples of both kinds preserved in the Paris museum, and from those collectively we have been enabled to produce the different studies of both the species which we intend submitting to our readers. The Rufous Orang-Outang is the subject of our present enquiry, the other will become more fully the object of our consideration at another period. The history of both those animals are so intimately interwoven that we could scarcely speak thus far respecting one without adverting to the other, but we shall now for the present confine our attention chiefly to the Rufous kind, the Simia Satyrus.

We have already remarked that there are scarcely any of the known kinds of animals more rare in the cabinets of Europe than the

Orang-Outangs; their preserved remains are extant only in a few museums of the first importance, and the naturalist who has been so fortunate as to see any animal of this kind alive, may indeed felicitate himself upon the occurrence. It has been said with some emphasis of the celebrated Maupertuis, that he would have preferred an hour's contemplation of the Orang-Outang to the conversation of the most learned of mankind. The expression is worthy of the philosopher! though it cannot be understood that Maupertuis would have abandoned, except for awhile to gratify his contemplations, the society of the learned, to hold converse by signs and gestures with these sagacious beings of the Simia race; and the instances are so few in which such an opportunity has been afforded the European philosopher to gratify reflection and enquiry that we are not to be surprised at the zealous manner in which such a gratification would be acknowledged.

In the time of George Edwards, the great English ornithologist of his day, there was a living animal of this species in England, the individual example from which his drawings were taken, and which, with all its faults, furnished Linnæus, as already shown, with the information upon which his description of the species rests. The whole collection of the original drawings of Edwards were deposited, after his death, in the British Museum, and it is presumed also from the observations of Professor Camper of the Hague upon the subject of the Orang-Outang, published some years after, that the remains of the animal were also placed in the Museum. Camper having requested M. Rooistra, a medical friend at that time in England, and Dr. Maty, then attached to the establishment of the Museum, to examine whether the great toes of the feet were furnished with a nail, as Edwards had delineated, and received for answer that they were not; this was in the year 1772. Much about the same time there were a few specimens dispersed among the curious, most of which appear to have been in spirits, Camper acknowledging the present of one from Mr. Hope, another was lent to him by Vosmaer, a third was received from Van Hoey, and a fourth from Van der Meulin; but the most material acquisition of this kind to the European naturalist, about that period, was a living example brought from Borneo into Holland in the year 1776, the particulars of which were published by Vosmaer two years after, and the figure inserted in the Dutch edition by Allamand. In the year 1808 there was a living animal of this kind in Paris, which had been presented by Decaen to the Empress Josephine, the skin of which having passed through the hands of the Taxidermist, is now preserved in the Paris Museum. The only example of the species that has been seen alive in this country within our memory is that which was brought hither by Mr. Clarke Abel, one of the gentlemen attached to the suite of Lord Amherst in his embassy to the court of China. The animal had been presented to Mr. Abel when the Cæsar touched at Java, on her return homewards, and very happily survived the difficulties of a sea passage, and lived about two years after its arrival in England. "For the possession of this rare animal," says Mr. Abel, "the scientific world is indebted to Captain Methuen, who brought him from Banjermassing on the south coast of Borneo to Java, and in hope of aiding the cause of science placed him in my possession; the natives (of Borneo) informed Captain Methuen that he had been brought from the high lands of the interior, and that he was very difficult and rare to take, and they evidently considered him a great curiosity as they flocked round to see him." p. 319

In the "Narrative" of this voyage to the court of Pekin, Mr. Abel enters with much minuteness into the peculiarities of this curious animal; his description is also accompanied with a drawing of it taken shortly after its arrival; it is from the pencil of the late Mr. Sydenham Edwards; that figure represents the Orang-Outang in a squat position, with the legs folded under it, a position from which the true proportions of the lower limbs cannot be in any manner understood. The standing figure in the works of Allamand of the specimen seen alive at the Hague some years since is better and more characteristic of its true formation when standing, or in the act of ascending, as we have often witnessed by comparing it with the living animal; but as we have had the additional advantage, besides our study of its manners in a living state, of ascertaining the respective proportions of its limbs from the skeleton itself, we may trust that our figures will not fail to convey a very correct idea of the animal. In our present plate one of these creatures is seen half-reclining upon the trunk of a tree with a staff in his hand, a posture not unusual with this animal; the other appears standing nearly erect. This latter figure is calculated to shew the manner in which the animal can best appear in an erect position: that is not by standing firmly like a human being upon the level earth, but by grasping the branch of a tree obliquely with one or both of its feet, which are formed for climbing, and then lifting itself up, as it can with facility, in a standing or erect position.

When the animal arrived in England, its various proportions were taken with much accuracy by Mr. Abel, who has subjoined a table of those proportions. From the great difficulty of being accurate without employing coercion in taking these measurements of the living animal, Mr. Abel was induced at a later period to perform the same task again, and as both tables may be presumed to afford a pretty near approximation, we are enabled, by comparing them together, to perceive the progress of its growth during the interval. The animal was very young and had not completed its dentation; two of its teeth, the posterior grinder on each side of the upper jaw were cut a few months after its arrival: nor indeed had all its teeth appeared at the time it died, as we now perceive from comparing its skull with the adult animal. The first measurements were taken in the month of September, 1817, the others on the 28th of May, 1818; at the first of these periods it measured twenty-eight inches from the vertex of the head to the bottom of the heel, at the other the height had increased three inches and a half, for it then measured thirty one inches and a half, and its weight, which had been taken in December, 1817, and found to be thirty-five pounds and a half, had increased to forty-three pounds in May of the following year; an increase of seven pounds and a half in the space of five months. This rapidity of growth agrees with that of the female alive in Paris in the year 1808, which at the age of two years was more than two feet high, and grew from twenty-six to thirty inches in the space of between five and six months.

The stature of the animal that was alive in England in 1818, accords pretty nearly with that which was alive in Paris in the year 1808, and of which the preserved skin is now set up in the Parisian Museum.

The fur of this animal is a rufous brown: this is the colour of the hair, the skin beneath being of a blueish grey. The hair upon the back longest, being in some parts six inches long, and on its first arrival in England it was still longer: the hair of the back is directed downwards as it is also on the upper arm, but on the lower arm it is reversed and turned upwards, and on the thighs inwards. The hair upon the legs and arms is not quite so long as on the back, and on the shoulders, elbows and knees is short and thinly spread: on the back of the hands and feet the hair is very short. The palms of the hands, and soles of the feet quite bare and of a copper colour.

The face is prominent or salient, and of a blueish grey colour: the forehead high; the eyes approximate and of a dark hazel colour; and the mouth advanced considerably: the hair on the head dark, disposed on each side the face, and bending forward towards the face like whiskers, leaving bare the ear which very exactly resembles that of the human ear. In the front view the nose seems to be flat upon the face or with only a little elevation of the nostrils. In the profile the nose is seen situated in the hollow of a deep curve, formed by the depression of the face between the forehead and the mouth, the nostrils just rising above the line of curvature: the mouth is advanced, the margin copper colour. And beneath the chin a capacious membrane that gives it the appearance of a double chin when the animal inflates that part to testify his pleasure or resentment. The body inclines to corpulency: the belly is protuberant: and the belly with the breast of the animal, as before observed, were at the time of its first arrival bare, but afterwards became hairy. Each of the sides of the animal are marked with two stripes of copper colour which descend from the arm pits as low as the navel. The hands and feet are very long, the fingers long and slender: the thumb so short as not quite to reach the first joint of the fore finger:

the toes are long, but the great toe is very short and set close to the heel, and standing out in a right angle: it is destitute of a toe nail, while all the other toes as well as fingers have oval nails of a black colour that extend exactly to the ends of the fingers. The same prominency of the abdomen was observable in the living animal in France (in 1808) as in the article above described. It has been already seen that its dentation was not complete when it arrived in England; it had then only ten teeth in each jaw. In the month of December, 1817, he cut two of his posterior grinders, making altogether twelve teeth in each jaw, which is four less in each than it possesses at full maturity; the Orang-Outang, when full grown, having sixteen teeth in each jaw: namely, four in front, an incisive tooth on each side of these, and five grinders behind on each side; the total complement in both jaws being thirty-two.*

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* The teeth of the Orang-Outang are thus defined by Proffessor Illiger "*Dentes* omnes continui approximati, primores utrinque 4 erecti, incisores; *Laniarii* promoribus vix longiores conici; *Molares* obducti tritores utrinque, utrinsecus 5, anteriores 2 bicuspidati; posteriores 3 quadricuspidati." Illiger having divided the Simiæ of Linnæus into no less than thirteen genera, was constrained to be more explicitly minute in the peculiar form of the teeth than is precisely requisite to determine the Linnean genus. The genera of this author, as it may be conceived from their greater amount, are proportionately limited in the number of species contained in each. The only animals that bear the name of Simia in his arrangement are the Orang-Outang. Mr. Abel does not mention the form of the teeth in the description of his animal. To ascertain this with any degree of accuracy in the living animal, would have been indeed difficult, as we ourselves experienced, owing to the apprehensions of the poor animal that some harm might be intended. We have subsequently examined them in the skeleton, and find the fore teeth, and canine teeth agree with this definition; but the grinders are only three in number instead of five, the two anterior ones are bicuspidate, the posterior one tricuspidate. It is very probable two other grinders would have appeared on each side behind these if the animal had lived to a more advanced age.

First impressions are always strong, though not invariably so conclusive as subsequent observation; but when the mind has been much excited previously by expectation, and that the peculiarities of the object considered are strikingly obvious they rarely fail to prove correct. Such was really the case with us when we first saw the living Orang-Outang. This interesting animal, so long the subject of speculation among naturalists, could not but awaken an anxious wish to contemplate the living animal, and when the opportunity was afforded by the arrival of Mr. Abel's Orang-Outang at the Exeter Change Menagery, we shortly hastened to inspect it.

At the time we entered the apartment instead of finding a captive in chains, or confined within a cage of lattice-work, or railing, we found the little object of our visit seated at the tea table holding in one hand a slice of buttered bread, and in the other a large china handle tea-cup: he was in fact just then at his "tea," and this repast he seemed to enjoy, eating the bread and butter, and at intervals sipping and drinking his tea with much gravity and composure, and with perfect indifference to the number of visitors pressing round him; nor would he relinquish his meal though urged by his keeper, the better to exhibit his person to the company till he had entirely drained the cup of its contents.

What a frightful monster! is this, exclaimed a lady, who with other visitors entered the apartment at the same time with ourselves; he deigned to cast a look upon the lady, who had so plainly disclosed her mind, as if for a moment he had been surprised: it was not the expression of his mortified pride or of resentment; it was steadfast, intelligent, and mild, and seemed to imply that her exclamation of disgust was not misunderstood; and then resuming the gravity of his demeanour he continued his repast with composure and indifference. To us, disposed perhaps to view this prodigy with greater kindness, and to regard it as a being ordained by nature to occupy a more important station in the scale of the brute creation than we had already seen, his aspect was more extraordinary than displeasing. In those particulars, in which the similitude to the human frame was most observable, the likeness, it must be allowed, was far from flattered: according to our analytical ideas of symmetry or beauty, the arms were disproportionately much too long, the legs and thighs too short, and the face elongated beyond all due proportion; but his eye beamed intelligence, and spoke the workings of a sagacity endowed with strong mental powers and penetration. In the features of this interesting being the Physiognomist would more easily discover a resemblance to some gradations of the human race, than is found to exist in any other known animal. The greatest deficiency in this similitude arose from the extreme depression of the nasal organ which lies nearly flat upon the concavity of the face. With this exception the likeness was not remote. The features were those of the negro, amalgamated with certain peculiarities of the Chinese, and uniting with both a cast of character which reduced it nearer to the resemblance of the canine race. A nose of some considerable prominency would have rendered the likeness human, but in the apparent absence of this organ, owing to its flat position in the depression of his face between the eyes and the mouth, the greater length of the forehead, and projection of the muzzle became so conspicuous, as to produce this greater similitude to the brute creation *.

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* Professor Camper would have discovered in the profile of his face, some lines of parrallel with that of the boy of Borneo depicted in the work of Sir Stamford Raffles; there is a general accordance that cannot well escape observation.

In considering the features of this animal with attention, there was an anomalous appearance between age and youth: his unwillingness to part with his cup of tea was testified in the expressive glances of an old negro, with the untutored obstinacy of a rustic boy: he clasped the cup so firmly that it would have been broken before it could have been disengaged from his grasp; but no sooner was the repast finished than he resumed his former mildness and composure, and obeyed his keeper with affectionate obedience. He was accustomed, as we learnt afterwards, to a seat occasionally at the tea table, in the apartments of Mr. Cross, with himself and family, where he always behaved with due propriety. An ape or a monkey would have displayed many mischievous tricks among the paraphernalia of the tea table, but "Jocko" could be always trusted. Sometimes, though seated at the table, he would decline the proferred favour of partaking of the meal, but this he always did with good behaviour, turning his head aside and uttering a monotonous feeble sound as a sign of his refusal. When he experienced the kindness of any grateful present, such as an orange, or other palatable fruit, he would take the hand of the donor and press it to his lips, or those he knew, if required, he would salute upon the cheek with a kind of kiss; for he had some little muscular motion in the lips though they were destitute of that pliability which ours possess. Sometimes, after declining to partake of whatever chanced to be upon the table and sitting quietly observing the company with an air of melancholy and mildness, he would deliberately rise up in his place, survey every object round him, and if any thing happened to attract his fancy, he would, by pointing at it testify his wish for it: upon such occasions his only breach of decorum has been, when nothing else upon the table pleased him, to take without permission, or the assistance of the tea tongs, a small lump of sugar from the sugar-dish between his thumb and finger.

Fruit was the most grateful of his food. When ill he had broth, which he would eat out of a bason with a spoon, as he had been taught it seems by the boatswain of the "Caesar", in his voyage from Java to England. His partiality for raw meat while on board the ship, which Mr. Abel intimates, was not observable while he remained in the Exeter Change Managery: nor indeed was he singular in this respect, for none of the Simia race subsist on animal food: if by accident they are presented with a piece of raw meat they throw it away after chewing it a little to extract the juice, and it is indeed seldom that they are induced to put it into their mouths. Tea, milk, and water, he was in the usual habit of drinking, and Mr. Abel mentions coffee. His predeliction for strong liquors was plain from his once taking a bottle of the captain's brandy. After his arrival in England, he had no access to such ardent spirits, but beer and ale in particular delighted him: he would drink with his keeper, mug for mug, till his intellectual powers were pretty well overcome, and half tipsey Jocko, in such moments, was rather inclined to merriment; not testifying his mirth by any apeish or mischievous tricks, but relaxing a little from his usual gravity would romp with much good-nature, appearing at such times to forget he was a captive and seeming to consider himself only among his friends.

Sometimes when the keepers of the Managery were sitting down regaling themselves in his room with a tankard of ale, he would attentively watch all their movements beneath him, seated in his hammock near the ceiling, in the expectation of being invited to partake of his favourite beverage. For awhile he would sit very patiently, and then descending walk up to the table. If still not invited or made welcome, he would perhaps draw a chair to the table and mounting into it gaze round him as if to ascertain the cause of being unnoticed; and then resting his hands upon the edge of the table would venture to peep into the tankard, and was indeed delighted when he was allowed to drink the liquor that chanced to be remaining. Sometimes the keepers would intimate that he could not want any ale because he had not brought his mug for it; this hint was never lost, Jocko would immediately hasten up to a lofty shelf suspended near his hammock, where his half pint handle mug was placed, and returning with it in his hand, receive with much expression of pleasure the portion of ale which they thought proper to pour into the mug, holding it steadily by the handle while they poured it in. His fondness for milk has been mentioned: and as a proof of his sagacity: it may be added that he could distinguish the footsteps of a girl, who at an early hour every morning supplied the milk She no sooner began to ascend a lofty winding staircase leading to his apartment, than he would start from his bed; and hasten to the door with a jug in his hand to receive the milk, and if the door happened to be locked inside, as was sometimes the case, he would turn the key in the lock, and open the door with one hand, while with the other he held forth the jug to receive the milk.

“ Whilst in the island of Java, (Mr. Abel tells us) the Orang-Outang made his residence in a large tamarind tree, forming a bed by intertwining the small branches, and covering them with leaves; during the day he would lie, (says Mr. Abel) with his head projecting beyond his nest, watching whoever might pass under it, and when he saw any one with fruit, would descend to obtain a share of it. He always retired for the night at sunset, or sooner, if well fed, and rose with the sun, and visited those from whom he habitually received food." His great amusement, while at Java, was in clambering over the roofs of the houses, or in ascending the trees in quest of eggs, the contents of which appears to have been to him a favourite food, and which he sought after with success. When on board the ship which brought him to England, it appears that after several abortive attempts to confine him, he was allowed the range of the ship, and was not excelled by any of the seamen in the dexterity with which he ascended andr an among the rigging. Just before he left England, Mr. Abel caused him to be confined in a cage of bamboo, in order to be carried on board the ship; from this he effected his escape by breaking away one of the rails, which after trying the strength of each separately he found to be the weakest, and at which he never ceased working till its removal was accomplished. When on board, he was secured by means of a chain fastened to a strong iron staple, which he immediately broke out, and ran away with his chain trailing after him. Perceiving the inconvenience of this, he wrapped the chain twice or thrice round his body, and then threw the staple over one shoulder for the better convenience of carriage. Humanity very naturally induced his owner to relieve the poor sagacious captive of this burthensome appendage, and it does not appear that after this, when he was allowed his liberty without restraint, that he ever conducted himself improperly, in consequence of the indulgence.

When the Orang-Outang arrived in London, this latitude of liberty would have been incompatible with his safety. Mr. Abel presented it to Sir Everard Home, who with much proper feeling, directed it to be sent to the Exeter Change Menagery, that it might be carefully attended to while it lived, desiring only to have the body when it should die. The animal, it seems, was received during the absence of Mr. Cross; and the keepers aware of the importance of their charge, but ignorant alike of his social disposition, and his impatience under all restraint, lodged him for the night in a large cage faced with iron railing. He was, however, much fatigued, and rested very quietly for that time upon a litter of straw, and his little blanket wrapped round his head and shoulders. But awaking in the morning he became sensible of his situation, and began to exert himself to the utmost in the destruction of his prison; the bars were, however, too strong to yield to his effort, and he would no doubt have shortly destroyed himself had he not been liberated. He was next allowed a separate room to himself; and a number of cords stretched across just below the ceiling, formed a kind of hammock, with a litter of straw and blankets upon which he was destined to repose. To this he signified no opposition; during the day time he mounted his hammock and descended as required while company were present, with much apparent satisfaction; but, when night arrived, and Jocko found himself deserted by all, and fastened into the apartment, his placidity forsook him, for when at midnight his keepers alarmed by the strange noises they had heard entered into the room, they found him most busily engaged in the demonstrations of his displeasure: the little being had by main strength torn down a large bath stove from the fire place: the stove lay prostrate, as a testimony of his prowess and industry, upon the middle of the floor, and he was continuing his labours with great ardour, to remove the remainder of the brickwork in which the stove had been set, in order, as it appeared, to effect a passage from his prison through the walls of the chimney.

PLATE LVII.

After this atchievement, the keepers perceiving there would be no tranquillity if he should be left alone, one of them consented to have his bed brought into the room, and allow Jocko to lie down upon it. Jocko observing this, became very peaceable, sitting aloft upon his hammock and watching all their movements; and when he saw, by the light of his burning lamp, that his keeper had laid down, he descended, approaching the bed very deliberately, turned down the bed clothes and slipping into bed stretched himself out upon his back at his full length, and went to sleep; the keeper struck with the circumstance, allowed him to remain till morning. Subsequently a bed was always made up for Jocko, close to that of his keeper, which he regularly entered by turning aside the bed clothes, and when laid down stretching himself as before to the full extent upon his back, and going to sleep with his head above the bed clothes, exactly in conformity with the actions of his keeper when he retired to bed. And he never failed upon these occasions, when he had laid down, to extend his arm across the bed, and place it upon the breast of his keeper, just as a child would do in testimony of affection.

Much has been said to prove that the habitual progress of this race of animals upon the ground, resembles that of a human being crippled in the legs and moving with the aid of crutches. This is represented as a mode of proceeeding that enables the animal to go forward with much facility upon the ground, or any other level surface; and this appears by no means improbable, because from the great extent of arm a very slight posterior inclination of the body is alone requisite to allow the hands or clenched fist to reach beyond the feet, either before, behind, or laterally, as such a manner of proceeding would require; nor can we doubt, from the known strength of the fore arms, in addition to their extent, that like crutches to the valetudinarian, they would in such a movement materially assist the progress of the animal. Some travellers have asserted also, that it crawls upon its hands and feet, treading with its fore-arms as well as feet, in the manner of quadrupeds; and there are again others who declare that it proceeds in an erect position, like a human being.

All these accounts, so apparently discordant, may be readily reconciled, by presuming that either of those movements are possible to the Orang-Outang, as circumstances require; and that with respect to its walking erect occasionally, like man, there can be no more doubt than of its proceeding in any other manner.

Something very analogous to this is seen in the infant child of the human race when unassisted by the nurse, and also in infirm individuals, and in those at an advanced state of life. We are to recollect that all the animals of this kind that have been seen alive in Europe have been only infants of the race, and the human race, unaided during infancy in its movements, as appears lamentably exemplified in those unfortunate beings of our kind that have been found in a state of wildness, crawl upon the hands and feet, instead of walking erect upon the feet, and, to use the expression of Linnæus, are moreover mute and hairy; and there are tribes of African savages who are actually trained by their military chieftains to walk like quadrupeds on their hands and feet. The similitude in those points is therefore striking between the Orang-Outang and ferine man. We have been particularly anxious for this reason to ascertain if this similitude could be traced still more closely, whether, in a word, since man by culture and tuition in his infancy is taught to go constantly erect, the Orang-Outang was incapable of walking invariably erect also. The result has proved, that although his conformation is confessedly not so well adapted to an erect position, and much less to that firm and noble upright posture natural to man, there is nothing to render it physically impossible for this animal to walk erect; but for this purpose he must tread upon the exterior side or edge and not the sole of the foot, and proceed with some slight inclination of the body from its direct perpendicular, in order to equipoise exactly the various portions of his frame.

That an erect position could not be very unnatural to the Orang-Outang appeared in the first instance probable from the manner of his lying on his back with his legs stretched out while in bed; nor does the length and preponderance of the head appear to be any material impediment to its movements in an erect position, since the face presents a front perpendicular with the body. The great bulk of the abdomen, added to the comparative shortness of the legs and thighs, incline the animal to prefer sitting in a squat position, and when seated the legs are partly crossed and folded under him, much in the same manner as is customary among the Turks and Arabs and other eastern nations when they sit down. This mode of resting could be no argument therefore against the possibility of its walking in an erect position, since among those nations by whom it is in daily practice, we find the most noble and perfect forms of the human race when they stand erect. Indeed we have seen the Orang-Outang walk across the room with no ill-grace, and we have been assured also that he was not unfrequently accustomed to walk in the same manner with sufficient ease, and without compulsion, as though an erect position might become habitual to him, but in all his perambulations, instead of resting firmly upon the sole or palm of the foot, he trod upon the ground only with the exterior edge of the feet. We have very lately seen a series of Chinese drawings, in which the adult male, the female, and the young Orang-Outang are all three represented perfectly erect, like human beings, the male bearing a sword in his hand, like an armed man, the female and young carrying a store of the fruits of the forest for their subsistence *. This delineation seems to prove that those animals are accustomed to walk in an erect position when they have occasion to move over a considerable level space, but it is very probable that they reside among the trees of the mountain forests chiefly, and have little occasion to traverse the open plains. From its mode of treading upon the ground and the greater facility with which it ascends trees, it is perfectly evident the feet are scansorial or formed for climbing rather than for walking; and this persuasion is confirmed by the incurvate disposition of the bones of the foot in all the skeletons we have examined. From our own observations on the manners of the living animal, the erect position of this creature never appeared to more advantage than when ascending by means of the pendant ropes to his hammock, and we have no doubt, from every movement of the living animal, as well as from the structure of the foot developed in the skeleton, that when it has firmly grasped an erect or inclining branch of a tree, it can support itself with perfect ease in an erect or inclining position, an advantage of no small importance to its mode of life, since while standing upon one branch it can gather the fruits of others that impend at a distance over its head, without being at the trouble of mounting higher.

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* See plate 59 of the present work.

PLATE LVII.

The observations of Mr. Abel afford various traits of character which necessarily could not recur after he arrived in London; his dexterity in climbing the ropes and suspending himself in the most perilous situations while on board the Cæsar may be readily conceived from the address with which similar feats are known to be performed by the animals of the monkey tribe in general; his great length of arm and strength of grasp, as well as the scansorial structure of his feet, gave him a decided advantage in such exploits over the activity of our mariners, when disposed to exert himself; and in the expectation of an orange for his reward, he would always follow Mr. Abel to the mast-head with cheerfulness. Since, however, he was as impatient under repulse as sanguine in the pursuit, he oftentimes betrayed a spirit of impetuosity when he had overtaken his master and the object of his wishes was withheld; at first he would endeavour by his persuasive gestures and address to obtain the prize, and would even search the pockets of Mr. Abel to find the orange; but if after all his labours he was unsuccessful, he would sometimes throw himself down with violence, rolling himself about upon the deck with vexation and uttering piercing cries, but on every such occasion his resentment was vented upon himself, for he never seemed to intimate the slightest disposition to resent the disappointment on any other, not even those who tantalized him. Once he rushed with fury to the side of the ship, and disappearing in an instant, it was thought he had thrown himself in despair into the sea, but he was sometime afterwards discovered huddled under the chains on the ship's side, where he had crept to conceal himself, and as it was supposed, with the intention of alarming those who had offended him.

As there were several monkies on board the Cæsar, it did not escape remark, that although they would fain be sociable with the

Orang-Outang, and frequently renew their intrusions upon his company with familiarity for that purpose, he would never condescend to romp with them, as he was ever prone to do with willingness with the sailor-boys on board; the monkeys, on the other hand, would often creep by stealth to his cot and play their antics with him: once indeed he did deign to notice and punish a monkey that was gambolling and leaping over him as he was lying in his bed, for he caught the unfortunate culprit by the tail and thrust him among the blankets, and the offending monkey found himself in a state of captivity by no means agreeable in reward for his temerity. The same antipathy towards these analogous beings was no less manifest in his demeanour towards them in the menagery afterwards, and it appears certain, as we have in another place observed, that he would not be sociable with any animal, except a dog; with the latter he would play and romp just like a boy, patting him on one side of the head and then on the other, catching him by the tail, and rolling him over and over upon the floor. Among other traits of his dislike for the monkey race, there is one recorded of him while he remained on board the Cæsar that deserves repeating; some monkeys that were confined in a cage on board had happened to receive a present to which he seems to have thought himself entitled, and he was very shortly after seen holding the cage of captives over the ship's side, just ready to drop them into the sea; they were of course relieved from their perilous situation and Jocko dismissed with a proper reprimand.

The Orang-Outang, so far as we can judge from the example brought to England by Mr. Abel, is not easily dismayed by the fear of danger: the only instance in which the animal was observed to testify any symptom of alarm while on board the Cæsar, was upon the occasion of two or three large sea turtles being brought on board; when either to escape from them, or the better to inspect them, he ran up the shrouds immediately, and while surveying them from above appeared in deep amazement, projecting at the same time his mouth into the form of a hog's snout and uttering a piercing cry, which Mr. Abel likens to the grunting of a pig and the croaking of a frog. Upon another occasion, according to Mr. Abel, he appears to have been much concerned at seeing some men bathing naked in the sea, probably from an apprehension that they were in danger, for these animals are said to have no little dread of the danger of being themselves immersed in the watery element. We have ourselves once seem him under manifest symptoms of displeasure and alarm from the over anxious investigation of some young medical professors, who availing themselves of the momentary absence of the keeper, were rather too desirous of ascertaining the anatomical accuracy of Camper and Geoffroy, and were pressing and pinching the several parts of his head and body, without reflecting that the poor captive was neither insensible to pain nor ill-treatment. However desirable that information might be at such a period, for there was at that time no anatomical preparation of the animal in England, humanity impelled our interference in his favour, and the expression of gratitude in his countenance towards us was too obvious to be mistaken. He availed himself of this opportunity to escape, mounting in an instant up to his hammock of cordage near the ceiling, where, throwing a little blanket round him like a cloak, he sate a mimic resemblance of a hermit. From this lofty position he semed to contemplate with a mixed degree of emotion and restlessness, chattering all the while, the group below, and it was pretty well understood that but for the presence of his friends among his aggressors, he might, being then in safety, have shewn some further testimony of his displeasnre.

The provocation must be however great before this poor animal would resent it; his character, as it has been well observed, was rather that of melancholy mildness, and which was impressed so strongly upon his countenance that it appeared entirely natural to him. If he was susceptible of some transient bursts of passion, it was the momentary result of being disappointed of some favourite fruit with which he had been tantalized; he would on such occasions throw himself down with violence upon the ground and cry, but was never known to offer the slightest bodily resentment against those who mortified and disappointed him. He had nothing of the antics of an ape or monkey, his only pleasure appeared to be in assimilating his manners to the social habits of man. He could evidently discriminate the supreme importance of the human race, which he testified in every manner by his docility and affection, while the conscious superiority he seemed to entertain of himself above all others of the brute creation could not be pourtrayed more strongly than in his ever shunning their society: even that of the monkey tribe, when forced into his company to alleviate the monotony of his captivity, he would avoid with abhorrence; the dog was the only animal with which he was ever known to be in the least degree familiar or sociable. It is then an attribute of human reason and not of instinct, that the benevolence of the highest race of animated beings should extend to all beneath them; man was more indulgent to the inferior state of the Orang-Outang than he was to others, and thus marked the noble impulse of human reason beyond instinctive intelligence.

The Orang-Outang lived in the menagery for the space of nearly two years. During the winter season he was necessarily kept in a room warmed to a proper degree of temperature by means of stoves; in the summer season, when the weather proved fine and clear and the sun shone bright, he was sometimes indulged with a coach-ride, for the sake of air, to the distance of three or four miles round the environs of town. Upon such occasions he was accoutred in a holiday suit, a flannel dress, resembling a countryman's smock frock, tied round the collar and wrists with ribbons, and a little hat on his head; in this masquerade, with which he was always pleased, as testified by the relaxation of the gravity of his features into a kind of simper, he was stationed with his keeper on the seat, and in this posture he would steady himself while the coach was rocking by holding the lacings with his nearest hand, and leaning on the seat with the other. In these excursions some objects in particular would attract his notice as they passed, such as a remarkable building, a sign at an inn, a waggon or stage-coach, or any other very conspicuous object; these he would gaze upon in passing with much attention, not unfrequently putting his head out of the coach to obtain a better view of it.

In these excursions he was always treated with refreshments, a glass or two of wine or ale, and a few oranges; the glass of liquor he would take like a human being, and after drinking the contents, return the glass to the donor: this he once did with much grace to the landlord of an inn who had handed a glass of liquor to the keeper and another to "his friend," without perceiving that the friend was a biped of another race, till he observed the great length and rufous hairiness of his fingers with astonishment; upon another occasion he was handed from the coach into the parlour of an inn at some short distance from town, to the great terror of the host when he looked in to be favoured with his customer's commands; but alarms were needless, the crockery-ware and glasses were in no danger from the presence of poor Jocko ; he behaved with so much mildness and good manners that the landlord was upon the best terms possible with his customers at parting, and not a little gratified with the novelty of the visit.

It was not the least amusing part of the demeanour of this sagacious being to observe the manner in which, while enjoying these morning rides, he would take off the rind of an orange, peeling it, and as he peeled it gathering the rind into the hollow of his hand, and when his hand was full, throwing it out of the coach-window, and if any pieces had fallen from his hand picking them up and throwing them away also. So likewise in a room, when an orange was presented to him, he took the rind off with the same attention to cleanliness, gathering the rind in peeling into his hand, and then casting it away into the fire-place or some obscure corner of the room. This is a peculiarity in the manners of the Orang-Outang; an ape or monkey instead would be content to bite an orange and suck out the juice. The Orang-Outang after eating would also pick his teeth with his finger-nails, which the apes and monkeys are never observed to do; he had been likewise taught to pour out a glass of liquor from a bottle, a feat he performed with much facility and adroitness.

In his native climate the Orang-Outang had every opportunity of indulging an epicurean taste in the choice of food, many of the fruits peculiar to those parts of the globe being of the most delicious flavour and in great abundance ; in England he had not those advantages ; the fruits we rear appeared to be less grateful to him than might be imagined, he would partake of them, but his greatest fondness when in England, as it had been while on board the Cæsar, was for the orange. The present of an orange was always grateful to him—"Jocko!" the keeper would sometimes say to him, "there is an orange in my pocket for you;" the intimation was sufficient, he immediately put his hand into the pocket to find it, and was always mortified when he was teazed with disappointment. Occasionally an orange or some other fruit was deposited in a kind of locker, stationed in his room, and to this his visits were pretty frequently directed. Sometimes a little present of this kind was dropped into the chest without being observed by him, and if told there was something in the locker for him, he would proceed immediately to it, and lifting up the lid take out the prize; or if he found the box locked, as would sometimes prove the case, he would go back to the keeper for the key, and returning with it to the locker, put the key into the lock and open it. Something very similar was observed by Camper in the female Orang-Outang, that was living at the Hague in the year 1776; for this last mentioned animal, observing the manner in which her keeper locked and unlocked the padlock of his chain, was seen shortly after endeavouring to unlock the padlock by thrusting a splinter of wood into the ward, and failing in these efforts to throw back the spring, she washed the face of the lock with water, then wiped it dry, and seemed at last surprised that all her labours were not attended with success. This animal of Camper's preferred carrots and parsley to any other vegetables with which she was presented; perhaps oranges, had they been offered to her, would have proved more grateful.

The Orang-Outang being an inhabitant of a warm climate, is found to be extremely affected by the cold: when on board the

Cæsar, Mr. Abel's Orang-Outang suffered greatly from the cold in doubling the Cape of Good Hope; he would at that time fly to the arms of any one who would allow him to cling close to their body, in order to imbibe the heat: this was also the case with the animal presented by Decaen to the Empress Josephine of France, during the reign of Napoleon; it had been landed in Spain, and having to cross the Pyrenees, suffered so dreadfully from the cold that it lost some of its fingers in the journey, and very nearly its life. This is the animal whose remains are preserved at present in the Museum of Natural History in the *Jardin des Plantes.*

That this sagacious animal had an idea of cleanliness much beyond what might be expected is evident from the manners of the example we had in England; it was amazing enough to observe the patient manner and apparent satisfaction with which this last mentioned animal was accustomed to have his face and hands washed, and his hair combed smooth out; and that he had an idea of cleanliness in every other respect appeared no less certain.

After remaining for some time in London, in the enjoyment of good health, this poor animal became constitutionally indisposed. During his illness every care was bestowed upon him, the most nourishing food was administered, and lastly the aid of medical assistance when it was deemed indispensable. Medicines were administered which he took with placid acquiescence. By this time he had become sufficiently conversant with his keepers, and his keepers with him, to comprehend each other without difficulty, and he seemed to feel every consolation in his affliction in the attention shewn to him. We may perhaps attribute this placidity to a consciousness of the failure of his own strength and a lassitude, or want of spirit, resulting from a sinking constitution, but those who best knew his traits of character and disposition assert the contrary, and rest convinced it arose only from an assurance in his own mind, if we may so express it, that whatever was done for him was intended for his welfare. Among other operations that of phlebotomy was performed upon him, an operation, which however acute, this sagacious being submitted to with perfect resignation; Sir Everard Home opened a vein in one of his arms, and let him lose some blood; this materially relieved him, and no doubt tended much to produce that convalescence which gradually succeeded. It is more than probable that the relief afforded him upon this occasion was considerable, for he would frequently afterwards during his illness stretch out his arm, and with the finger of the other arm point out the impression left by the incision of the lancet, not with any sign of anger, but as his keepers understood to shew that he had derived benefit from the operation. After awhile he recovered from that illness and was improving fast, when a relapse more violent than his first illness ensued, and in which all medical aid was unavailing. From an animal of much comparative corpulence he wasted rapidly, like a human being in a deep state of consumption, and shortly after expired: he died in the beginning of the year 1820.

The observations we have offered upon the manners of this interesting animal are those which the opportunities of our own visit have afforded, in addition to such as have been gleaned upon enquiry from the information of those to whose care he was confided. It will be perceived from the various circumstances related, that the naturalist is much indebted to the judicious conduct and humanity with which this animal was treated by Mr. Cross, the proprietor of the Exeter Change Menagery to whose care he was consigned, for many of those traits of his sagacity that were elicited ; and it is impossible to say to what extent those might have further been developed under his care had the animal survived a few years longer. We cannot but perceive that the intelligence of this animal was so conspicuous and his manners so engaging, that in defiance of a form which by many might be deemed somewhat at least repulsive, no one was sparing of their kindness or attention in rendering his life of captivity as comfortable, as life can be, to a being so apparently gifted with powers of discrimination, when deprived of his natural liberty and the society of his kindred kind *. Let us place this simple narrative of facts ; those mental emanations of an animal, which, from its size and consequently age, can be considered only as the Orang-Outang in a state of infancy, against the hypothesis of speculative writers, and judge whether they are just when they pronounce that the intellectual powers of these animals are not greater than those of the dog. Every one will be disposed to allow that the intelligence of the dog is very great and commands our admiration ; but who in the Orang-Outang, even in its infant state, does not perceive an intelligence far superior ? An intelligence so analogous at least in its similitude to the reasoning powers of man, that it may be doubted whether in a state of wildness and in association with the brute creation, the human race would not appear more distantly removed from the semblance of humanity than the Orang-Outang. It seems possible, at least by early tuition, to

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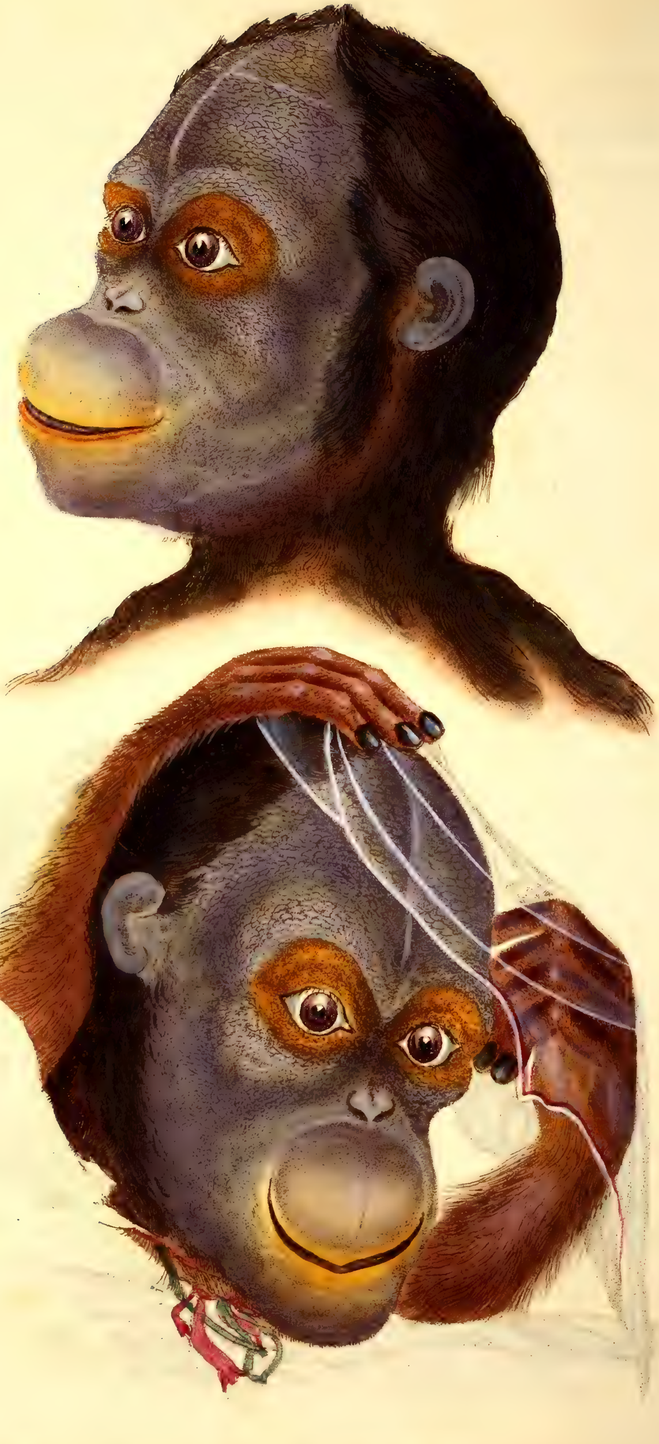
* It is said to exist in a state of society as a distinct race of men in the forests of Sumatra.

reduce this being to a state of domestication; we have yet to learn the qualities of disposition in the full-grown Orang-Outang; we admit that it may perhaps be less amiable than in the infant state, but of this we have no confirmation.



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MAMMALOGY.

PLATE LVIII.

SIMIA SATYRUS

RUFOUS ORANG OUTANG,

TWO STUDIES

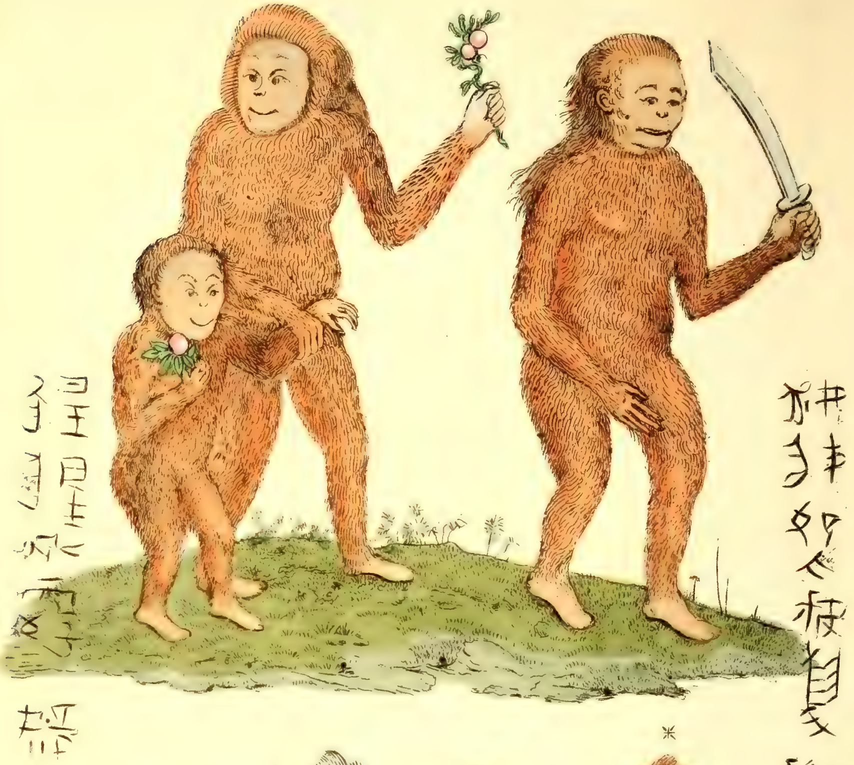
OF

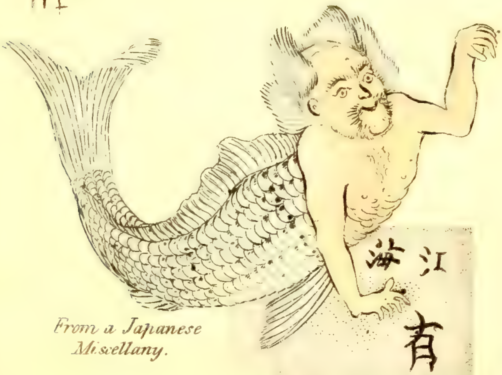
THE HEAD.

After having so minutely entered into the scientific character, as well as history, manners and peculiarities of this extraordinary animal in the preceding article, we rest persuaded that there can be no necessity for again adverting to those particulars. It may be sufficient to observe that the figures in the annexed plate present two studies of the head in different positions, the upper one shewing the contour of the face in a direction the most favourable for expressing the relative proportions of the profile to the whole visage; the other, its appearance when viewed immediately in front. In the first of these the countenance pourtrays his characteristic gravity and penetration in his serious and more pensive moments; the other in his more playful mood, when pleased with the finery of some articles of dress bestowed upon him in the menagery, and on the point of taking his departure upon a little country excursion.

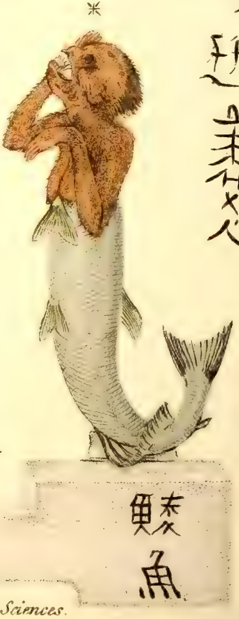
Those figures have been taken with every degree of care and due attention to scientificaccuracy, and will, it is presumed, be found of no inconsiderable utility to the naturalist in forming a correct opinion of the instinctive characters of the animal, so far at least as external characters are likely to be useful in the development of the innate propensities of its instincts, we had almost said, the properties his mind.

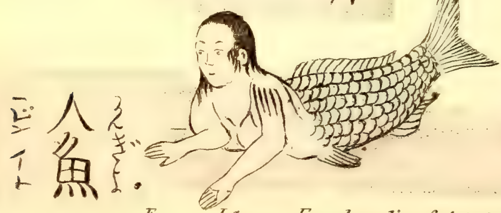
From a Chinese Drawing.





From a Japanese Miscellany.




にんぎよ
人魚
ジンイト

From a Japanese Encyclopædia of Arts & Sciences.

London Published by E. Donovan & Mefs.rs Simpkin & Marshall Oct.r 1 1823.

MAMMALOGY.

PLATE LIX.

MISCELLANEOUS ILLUSTRATIONS
OF
SIMIA SATYRUS
THE RUFOUS ORANG-OUTANG,
AND
THE NOTES ANNEXED.

As an appropriate sequel to the illustration of the interesting inquiry, to which so many of the preceding pages have been devoted, we have added the annexed plate. The objects introduced, it must be confessed, are rather better calculated to gratify curiosity than any taste for elegance in the pictorial art, but as a sequel to our preceding observations we are led to deem them most decidedly worthy of consideration; it need be scarcely added after this remark, that [illegible]ation has been our only aim, without the least regard to those improvements in the design or execution which would have rendered them more pleasing but less faithful representations of the originals.

The upper figures are copied from a Chinese drawing; they collectively exhibit a group of those animals, and which from every indication we are to regard as a whole family, including the male, female, and young. The male is represented as the foremost object of the group; he bears a sword or scimitar in his hand, and which, according to the known custom of China, is borne in the left hand. However coarse the execution of those figures, there is a commendable delicacy in attitude of this animal; we at once perceive, from the weapon of defence which he carries, that in this figure we see the individual which the Chinese artist intended for the male. The same delicacy is observable in the other figures; the female bears a little bough of fruit in her hand which sufficiently contrasts with the sword in the hand of the male, and the minor being, led by the female parent, is obviously intended for the infant animal her offspring.

In admitting this group to afford us no very favourable idea of the talents of the Chinese artist to whom we are indebted for the delineation, the naturalist will not lose sight of another consideration far more important; he will perceive some interesting traits of the mind of the artist, where the efforts of the pencil have failed to excite his praise; he will trace in this group the conceptions of the artist as to the manners and habits of life presumed to be pursued by those animals, and will hence deduce that the opinions entertained of them by the Chinese are probably no other than that they are a social though subordinate race of beings, and gifted with understandings scarcely less rational than that at least of ferine or untutored man. Notwithstanding their deformity they walk nearly erect, and the bravery of the male, like the prudence of the female and young, is at once expressed; they are supposed to be on an excursion in quest of fruit, their natural subsistence, and the dangers to which they are apparently exposed is exemplified in the necessity of the male proceeding with them armed, to protect and defend them. We shall only add, that this group of figures is selected from a set of drawings sanctioned by the favourable opinions of the Chinese, and no doubt express their ideas of those animals, with which they have become acquainted by means not perhaps at present known to any of the European naturalists.

The figure that appears on the left side of the plate at the bottom will convey an idea sufficiently accurate of the anomalous object denominated the "MERMAID," the particulars of whose conformation has been developed with some minuteness in the note subjoined to the description of the Rufous Orang-Outang, and in further elucidation of that curious subject of enquiry there are two representations of those ideal, or rather mythological objects represented by certain Japanese artists, whose labours have been introduced into Europe by the late Dr. Suttzer. The upper figure appears in a Japanese Miscellany, the lower one in an Encyclopædia of their arts and science. We have already in several instances alluded pretty fully to those figures in the course of our enquiry respecting the pretended "Mermaid;" in both the upper half resembles the human figure, the lower portion that of a fish; the first is male, the latter female, and both, but the latter more especially, affords a very striking elucidation of the compound object denominated the "Mermaid*," as well as the probable motive for its fabrication, if we are indeed to consider it as an object of mythological superstition, which is not, in the least degree, improbable.

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[*] Vide Notes in sheet S and T.

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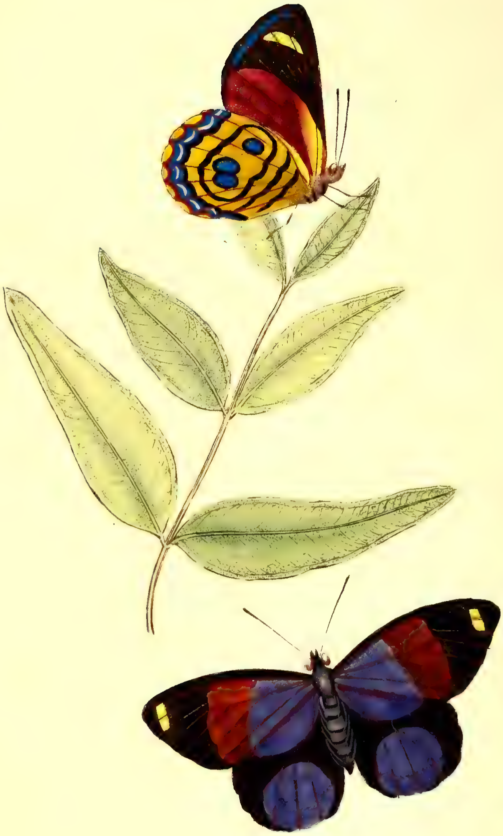

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ENTOMOLOGY.

PLATE LX.

PAPILIO HYDASPES

HYDASPES BUTTERFLY

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a club: wings erect when at rest. Fly by day.

*** Danai Festivi.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings entire, fuscous, with a shining blue gloss: posterior pair beneath yellow with annular black lines, and three blue dots.

PLATE LX.

Papilio Hydaspes: alis integerrimis fuscis cœruleo micantibus, posticis subtus flavis, lineis annularibus nigris punctisque tribus cœruleis. *Fabr. Ent. Syst. t.* 3. *p.* 1. 54. 167.

Papilio Hystaspes: *Fabr. Spec. Ins. t.* 2. *p.* 57. 254.

A splendid Brazilian species of the Papilio tribe, described by Fabricius from a specimen in the Banksian cabinet. It occurs in the first instance in his Species Insectorum, under the name of Hystaspes *, and subsequently in his other works under that of Hydaspes †. The naturalist will perceive upon collating the descriptions, that it is the same insect which Fabricius has described under those two different names; and the identity is further shewn by the Fabrician MS. annexed to the drawing of the species in the collection of Mr. Jones. Our drawings are taken from the specimen in the Banksian cabinet, which Fabricius described.

This butterfly is allied to a natural family of very beautiful insects to which the species Codomannus appertains, that will be found inserted in the third plate of the present work: from which, however, on due comparison, it will appear to be specifically different. As the figures in the annexed plate must render any further description of this striking insect needless, we shall only add, that it is a species of which no figure is extant in the work of any author, and consequently whether considered as an illustration of a rare production treasured in the Banksian cabinet, the drawings of Mr. Jones, or the writings of Fabricius, it possesses every claim to the consideration of the Entomologist.

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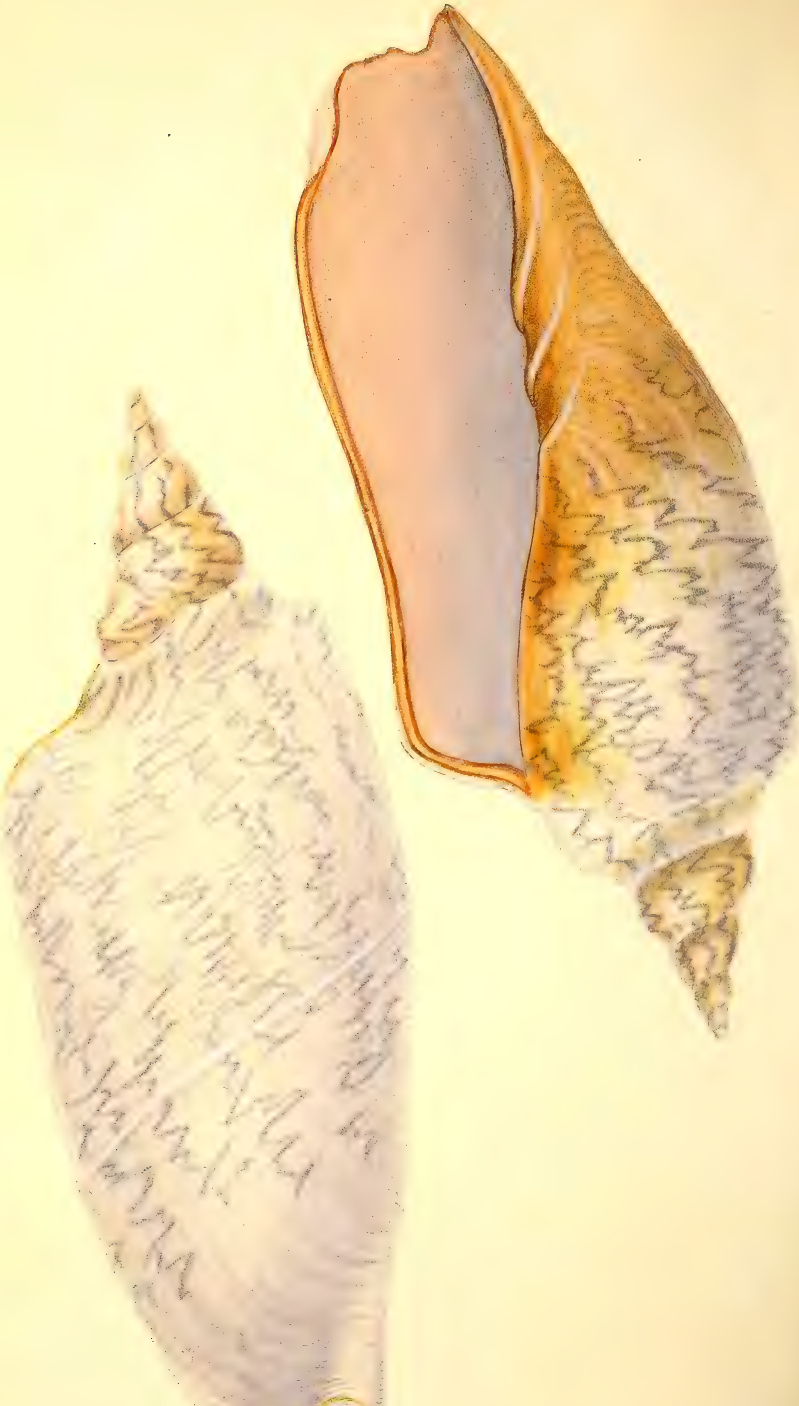
* Hystaspes, the Persian, the son of Arsames.

† Hydaspes, a friend of Æneas. *Virg. Æn.* 10. *v.* 747.



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CONCHOLOGY.

PLATE LXI.

VOLUTA DUFRESNII

DUFRESNE'S VOLUTA

UNIVALVE.

GENERIC CHARACTER.

Shell spiral: aperture without a beak and somewhat effuse: pillar twisted or plaited, and generally without lips or perforation.

**** Fusiform:

SPECIFIC CHARACTER.

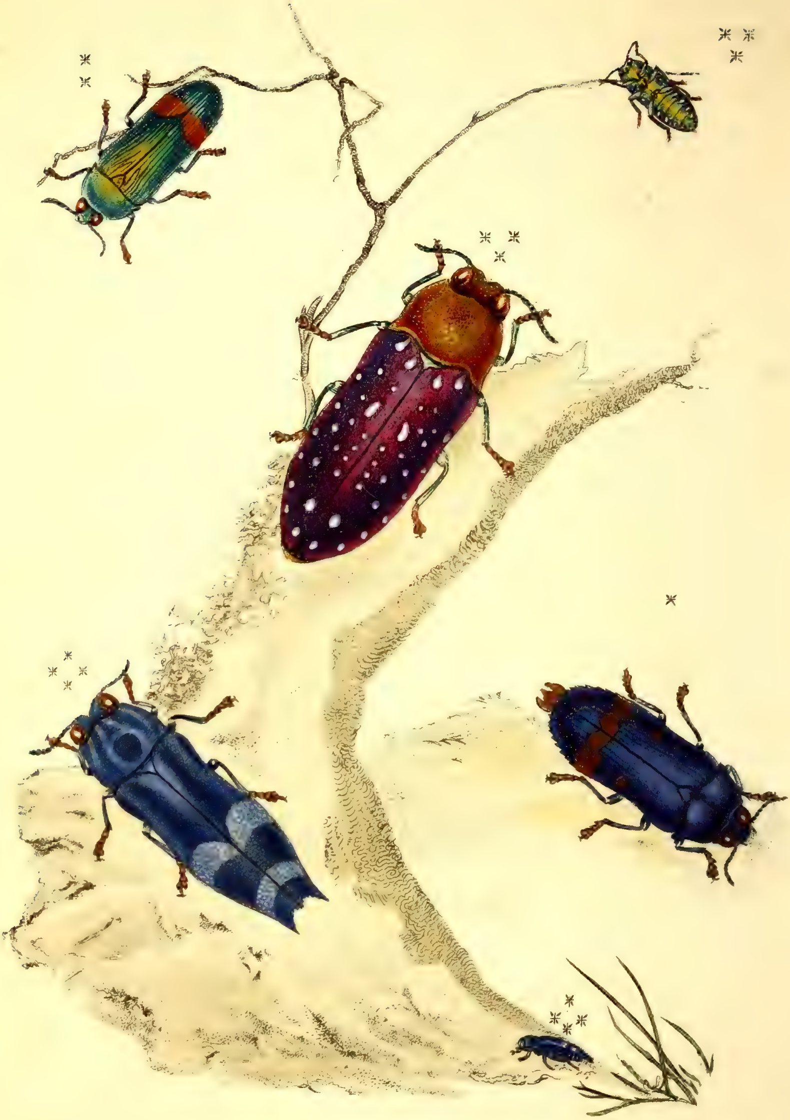
Shell elongated, smooth, somewhat yellowish, with zig-zag flexuous brown lines; aperture orange: pillar lip three plaited: first whorl of the spire slightly carinated.

VOLUTA DUFRESNII: testa elongata lævi subflavicante: lineis angulato-flexuosis fuscis: apertura aurantia, columella triplicata: anfractu primo subcarinato.

PLATE LXI.

The original shell from which our figures of this species are taken is in the collection of Alexander Mc. Leay, Esq. F. R. S. L. S. and Vice-President of the Horticultural Society, a gentleman to whom in this, as in many other instances, we have to express our thanks for the kind permission with which he has allowed us to enrich our publications with rarities of the first importance, contained in his extensive and invaluable collection. There are a few examples of this shell in the hands of different conchological collectors in this country, but the present, it is believed, may be pronounced the most estimable in point of size, colour, and perfection. It was found by Captain Campbell on the east coast of the Cape of Good Hope, but it is better known as a native of California, in South America.

That this shell may be found occasionally of a darker colour than the specimen we have represented must be admitted. There is a specimen of it in the conchological department of the Paris Museum, which certainly excels it; the prevailing tint is decidedly deeper, with the zig-zag lines more distinctly expressed, and also of a darker hue. The species is arranged in their Museum without having any name affixed, and we understood the professors of that department considered it as an undescribed species. Under the persuasion that it may prove a new as well as interesting shell we shall venture to name it Voluta Dufresnii, in compliment to that liberal naturalist Mons. Dufresne of the French Museum, to whom we were indebted for much politeness and attention in several visits we devoted last summer to that establishment, and whose extensive knowledge of Natural History in general, deservedly entitled him to peculiar distinction.



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ENTOMOLOGY.

PLATE LXII.

FIGURE I.

BUPRESTIS JUCUNDA

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform, serrated, and as long as the thorax ; feelers four, filiform ; the last joint obtuse or truncated : head partly retracted within the thorax.

SPECIFIC CHARACTER
AND
SYNONYM.

Wings-cases serrated, blue ; band behind and lateral dot blood red: thorax canaliculated.

BUPRESTIS JUCUNDA : elytris serratis cyaneis: fascia postica punctoque laterali sanguineis, thorace canaliculato. *Linn. Trans. t.* 12. *p.* 2. *p.* 381. *n.* 9.

A native of Brazil, described from a specimen in the possession of Mr. Hancock.

PLATE LXII.

The figure distinguished by a star * is the representation of this insect in its natural size.

FIG. II.

BUPRESTIS AMŒNA

SPECIFIC CHARACTER
AND
SYNONYM.

Wing-cases serrated: tip bidentated, cyaneous, striated; posterior band somewhat arched and testaceous.

BUPRESTIS AMŒNA: elytris serratis, apice bidentatis, cyaneis, striatis: fascia postica subarcuata testacea. *Linn. Trans. t.* 12. *p.* 2. *p.* 381. *n.* 10.

Rather smaller than the former, as will be perceived from the figure distinguished by two stars ⁑, which represents the insect of the natural size. The colour in this specimen is rather green than blue, but there is a supposed variety of this species that seems to differ only in being of a smaller size, the colour of which is deep blue.

This like the preceding is a native of Brazil, and was described by Mr. Kirby from a specimen in the possession of Mr. Hancock.

FIG. III.

BUPRESTIS LEUCOSTICTA

SPECIFIC CHARACTER
AND
SYNONYM.

Wing-cases slightly serrated, dark purple, scabrous, sprinkled with white dots: body golden green.

Buprestis Leucosticta: elytris serratulatis atro-violaceis scabris: punctis sparsis albis, corpore aurato-viridi. *Linn. Trans. t.* 12. *p.* 2. *p.* 382. 11.

There are two figures distinguished by triple stars; the first shown in the upper part of the plate exemplifies the appearance of the under surface of the insect, and also its natural size. The larger figure in the middle of the plate, which is likewise distinguished by three stars, presents an enlarged view of the upper surface, and when thus magnified, it exhibits an appearance of peculiar novelty and elegance.

This is a native of Australasia, and was described by Mr. Kirby from a specimen in the cabinet of Mr. Mc. Leay. There is a variety of the same species in the collection of Robert Brown, Esq. also from Australasia, which differs only in having the golden lustre of the head and thorax more inclining to greenish, and the wing-cases purplish instead of dark purple.

FIG. IV.

BUPRESTIS PULCHELLA

SPECIFIC CHARACTER

AND

SYNONYM.

Wing-cases acuminated, scabrous with two obscure white bands: body linear and cyaneous.

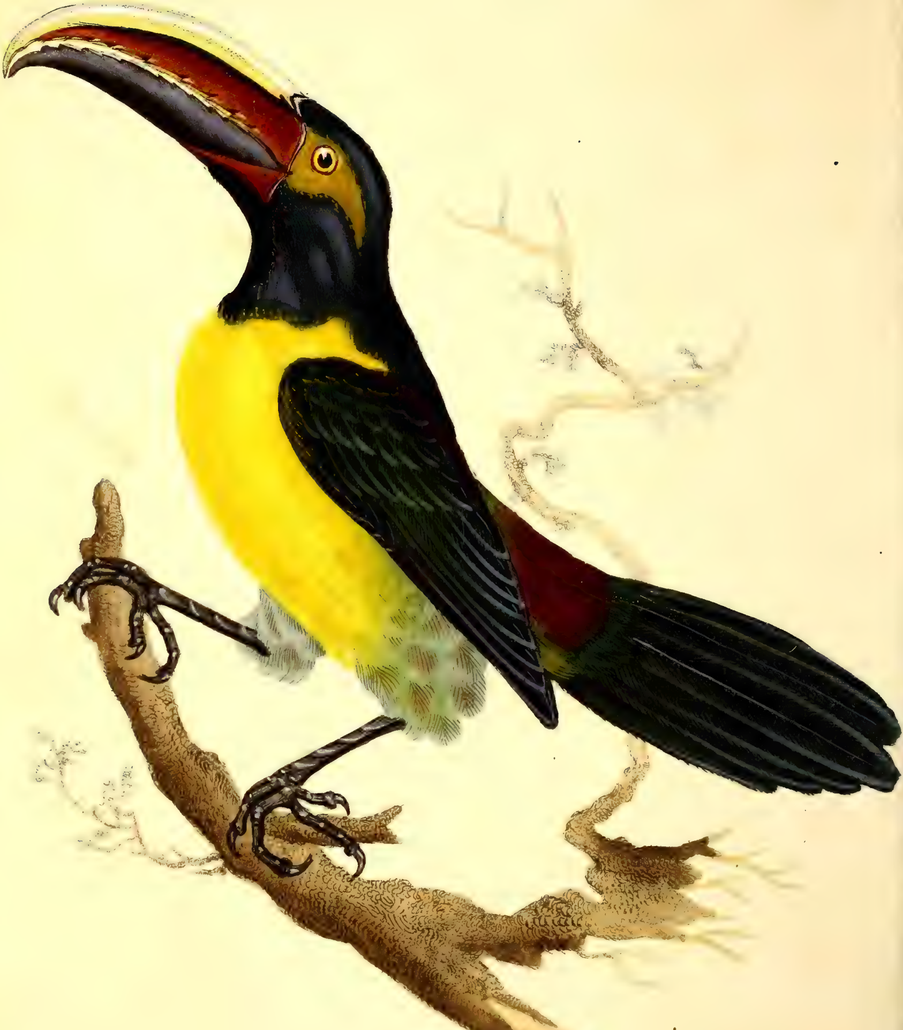
BUPRESTIS PULCHELLA: elytris acuminatis scabris: fasciis duabus obscuris albis, corpore lineari cyaneo. *Linn. Trans. t.* 12. *p.* 2. *p.* 380. *n.* 8.

This insect is from India, and not from New Holland as Mr. Kirby has by some oversight stated in his paper in the Linnæan Transactions. Mr. Mc. Leay's insect is from India, and Dr. Horsfield possesses it from Java. It appears to be the Buprestis Spinosa of Fabricius, although he does not notice the faint downy bands on the elytra.

This is an insect of diminutive size, but very singular formation. The smaller figure at the bottom of the plate, inscribed with four stars, shews the natural size, the other figure will elucidate the appearance it assumes when viewed through the lens of a microscope.

It was intimated to our readers some short time ago, that through the liberality of the council of the Linnæan Society, as well as kindness of other members, we should be enabled at a future period to produce certain *Icones* of extremely rare and interesting objects, the descriptions of which had appeared already in the Transactions of that learned body, but unaccompanied with any pictorial elucidation. We are happy upon the present occasion to have it in our power to gratify, in some degree at least, the public expectation by the partial fulfilment of our promise. The suite of insects delineated in the annexed plate will be found in this respect, it is presumed, of material interest to the scientific naturalist; they constitute an illustration of several choice and curious species of Buprestidæ, described in a valuable Entomological paper that appeared in the twelfth volume of the Linnæan Transactions, under the title of "Mr. Kirby's Century of Insects," and will be found on examination to consist of those only which have not been figured among the insects shewn in the explanatory plates accompanying that paper. Those insects were kindly communicated to us for the purpose of this illustration by the secretary of the society, Alexander Mc. Leay, Esq. and are of course the individual examples described in the Transactions of the society.

63



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ORNITHOLOGY.

PLATE LXIII.

RAMPHASTOS VIRIDIS

GREEN TOUCAN

Picæ.

GENERIC CHARACTER.

Bill very large, cellular within, convex, serrated at the edges, mandible incurvate at the tip: nostrils behind the base of the bill, long and narrow: tongue feathered at the edges: feet mostly formed for climbing.

SPECIFIC CHARACTER AND SYNONYMS.

Green, abdomen yellow, rump red.

Ramphastos Viridis: abdomine flavo, uropygio rubro. *Gmel. Linn. Syst. Nat. t.* 1. 353. 1.

Green Toucan, Ramphastos Viridis. *Lath. Syn.* 1. *p.* 331. *n.* 9. *Ind. Orn.*

PLATE LXIII.

Tucana Cayennensis Viridis. *Bris. av.* 4. *p.* 423. *n.* 8. *t.* 33.
Toucan Verd de Cayenne. *Buff. pl. Enlum. n.* 727. 728.

The extraordinary magnitude of the bill in the Toucan tribe cannot fail to excite attention ; in comparison with the dimensions of the bird it may be deemed enormous, and its structure is not less singular, or less worthy of remark. There is some difference in the proportions and form of the bill in different species of the Linnæan Toucans, and also in the union of the toes of the feet; and these differences have induced some late ornithologists to divide the Toucans into two or more sections, as we find in the writings of Vieillot and others. The bird before us was originally described by Brisson, under the name of Tucana, whence the more familiar name of Toucan. It was afterwards described by Buffon under the name of Aracari, and by Linnæus under that of Ramphastos viridis. Illiger has again assigned to it another name, he denominates it Pteroglossus, and it now constitutes the type of his genus of that name. This alteration, which appears to be suggested by peculiar circumstances, however accurate, we deem unlikely to contribute in any material degree to the assistance of the Ornithologist in the determination of the genus ; the character of the bill and legs are alone sufficient for this purpose, and we therefore feel but little inclination to abandon the Linnæan name by which this tribe of birds has been so well distinguished for nearly a century past in favor of another assuredly less expressive of the obvious character of the genus ; the Linnæan term alluding to the bill or rostrum, the singularity of which is sufficiently conspicuous, while that of the Pteroglossi refers only to the feather-like form of the tongue*, which in the preserved specimens may be often concealed or wholly wanting.

The bill of these birds, notwithstanding their disproportionate magnitude are not to be regarded as a heavy incumbrance to the beings ordained to carry them. They are not precisely hollow, as some writers describe, but of a cellular or porous nature within, and are perhaps adapted to some particular purposes in their habits of life which have hitherto escaped attention. They subsist on insects and the secreted fluids of certain plants, especially the palm-trees, which they mostly frequent.

The birds of the Toucan tribe are principally confined to those regions of South America which lie between the tropics; they are sociable in their nature, living together in small flocks; the eggs are white, and are usually deposited in the holes formed by woodpeckers and other hard-billed birds. Our present species, which is distinguished by the name of the Green Toucan is about fourteen inches in length, and is found principally in Cayenne.

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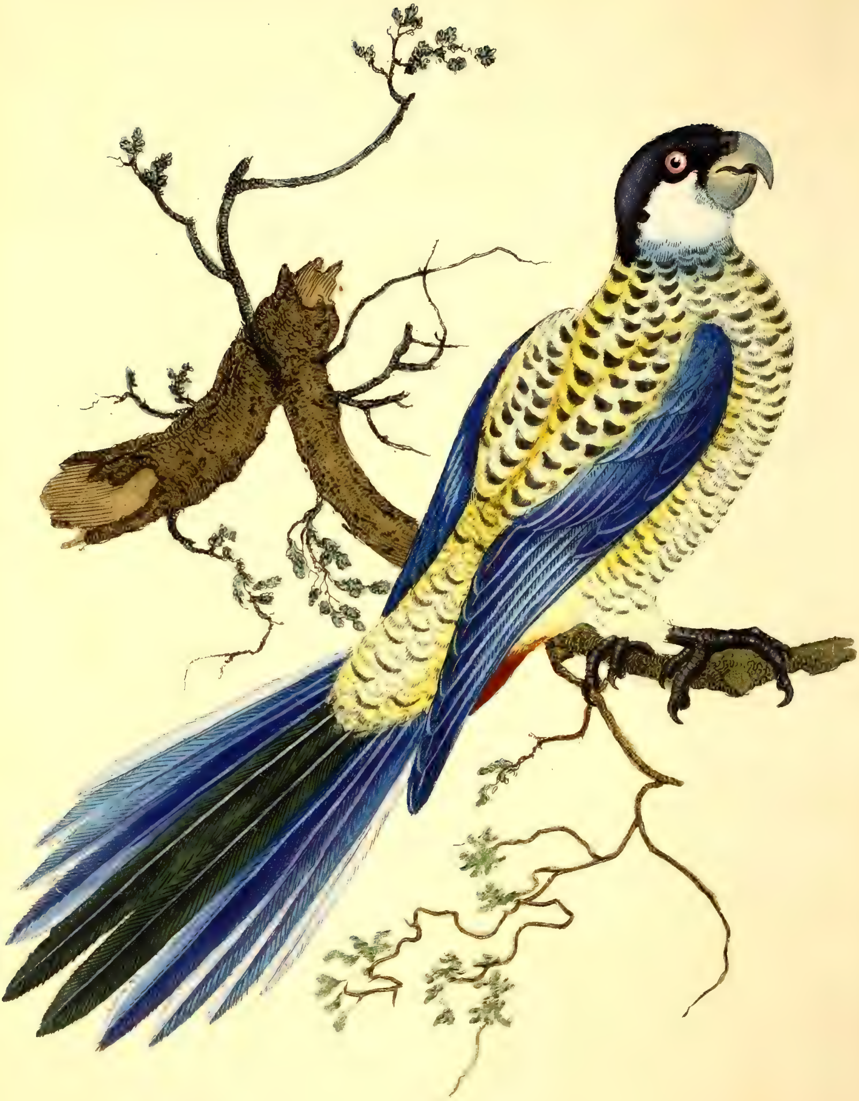
[*] The Linnæan name *Ramphastos* is taken from ϱαμφος (*rostrum*) in allusion to the enormous size of the bill, that of *Pteroglossus* by Illiger from πτεϱον *penna* (feather) and γλωσσα *lingua* (tongue).

64



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ORNITHOLOGY.

PLATE LXIV.

PSITTACUS BROWNII

BROWN'S PARROT

PICÆ.

GENERIC CHARACTER.

Bill falcated: upper mandible moveable and in general covered with a cere: nostrils rounded, placed in the base of the bill: tongue fleshys, obtuse entire: feet formed for climbing.

SPECIFIC CHARACTER
AND
SYNONYMS.

Body pale yellow, breast and back marked with black lunules: head black, temples white: wings and tail blue, the two middle tail feathers black: vent red.

PSITTACUS BROWNII: corpore luteo, pectore dorsoque lunulis nigris: capite nigro temporibus albis, alis caudaque cæruleis rectricibus duabus intermediis nigris, crisso rubro.

PLATE LXIV.

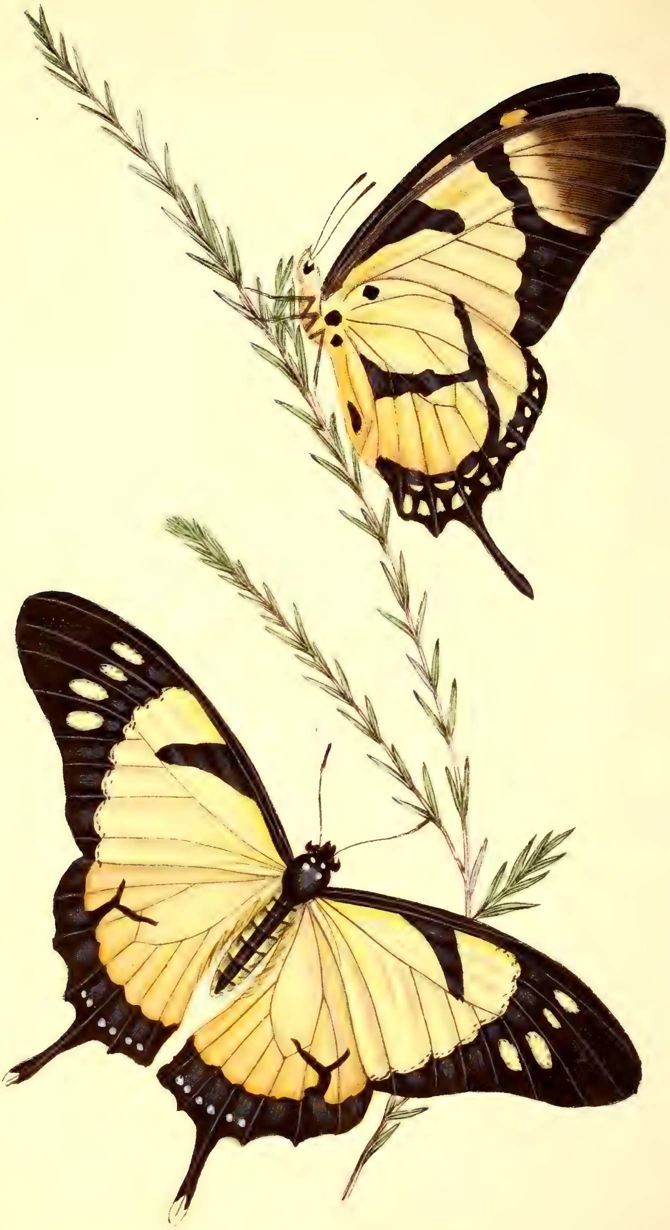
In the 13th volume of the Transactions of the Linnæan Society will be found an interesting paper upon the genus Psittacus: this paper, which is entirely in the French language and was written by Professor Temminck, affords a minute and very accurate detail of several new species preserved in the museum of the society, and that which is now the object of our consideration occurs among the number. This bird, which in the variety and delicacy of its colours, as well as elegance of its markings constitutes one of the most beautiful of its tribe at present known, was met with by Robert Brown, Esq. at a place called Arnheimsland upon the North Coast of New South Wales, and being considered as the only example of its kind known in Europe, was liberally presented by him to the museum of the society. Professor Temminck, who records the circumstance in his interesting memoir, has very properly denominated it specifically Brownii, in compliment to the naturalist to whom we are indebted for this interesting ornithological discovery.

The paper of Professor Temminck having appeared in the Transactions unaccompanied by a figure, we rest persuaded the annexed representation will be received by the scientific naturalist with considerable pleasure. As we have already expressed our persuasion that this bird is at present unique, it must be superfluous to add that it is copied from the individual bird described in the Linnæan Transaction, and that it appears in our work by the express permission of the society.

This paper of Mr. Temminck's being written, as before observed, in the French language, some few at least among the number of our readers may not be displeased if we render the more interesting of its passages into English: it proceeds as follows:—

“ Psittacus Brownii. Perruche de Brown, &c. Parrot of Brown. A cap of deep black covers the head, surrounding the eyes and extending from thence to the nape of the neck, where the black feathers are terminated by points of red; the cheeks are of a pure white; the white commences under the eyes by demi-tints of azure blue; the feathers of the back and scapulars are black in the middle, and all of them are surrounded by a zone of a fine yellow colour. The rump down to the tail, together with the breast and belly, are of a yellowish white, and the whole of the feathers are terminated by a very narrow black embroidery or line. The coverts of the wings, as well the superior as inferior ones, are of an azure blue colour and very brilliant. The quills and great coverts edged externally with a lively blue; the tail is large and sloping laterally, with all the feathers of a deep blue; the four side feathers on each side are terminated as in the *Perruche omnicolore* of Vaillant, by a colour of whitish azure. The coverts under the tail, or vent feathers, are red; the legs black and the bill of a leaden grey. Total length eleven inches. This new species is dedicated to Mr. Robert Brown.” *Linn. Trans. vol.* 13. *p.* 119.

65



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ENTOMOLOGY.

PLATE LXV.

PAPILIO DOLICAON

DOLICAON BUTTERFLY

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip and usually terminating in a club: wings erect when at rest. Fly by day.

** Equites Achivi.

SPECIFIC CHARACTER
AND
SYNONYMS.

Wings tailed, yellowish, with a common black border, posterior ones with marginal white dots above and beneath.

PAPILIO DOLICAON: alis caudatis flavescentibus limbo communi nigro; posticarum utrinque punctis marginalibus albis.

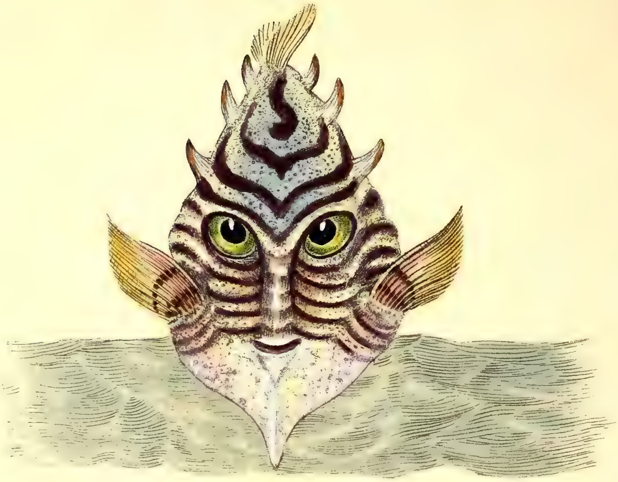
PLATE LXV.

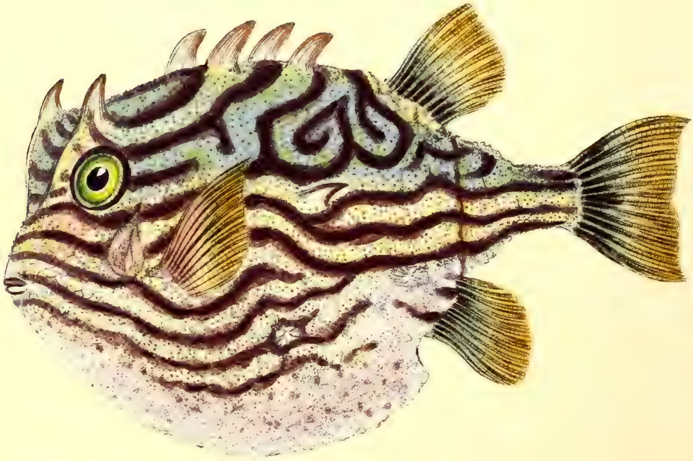
Papilio Dolicaon: alis caudatis albis: limbo communi nigro: posticarum utrinque punctis marginalibus albis.
Fabr. Ent. Syst. t. 3. *p.* 1. *p.* 3. *n.* 66.

A species of very rare occurrence. It is a native of South America, and is remarkable for the delicacy and elegance of its appearance. Fabricius, who visited London about half a century ago, saw a specimen of this insect in the cabinet of an English collector, Mr. Yeats, and describes it as being of a white colour. The example which he observed in that cabinet was probably much faded, for when in fine condition the tint is a warm and tender yellowish, delicately shaded with a brownish hue.

The figures in the annexed plate exhibit both the upper and lower surface.

66





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ICHTHYOLOGY.

PLATE LXVI.

OSTRACION TOBINII

TOBIN'S STRIPED TRUNK FISH

BRANCHIOSTEGI.

GENERIC CHARACTER.

Teeth round, pointing forward and rather blunt: body mailed by an osseous covering.

SPECIFIC CHARACTER

AND

SYNONYMS.

Blueish, beneath silvery with longitudinal dusky stripes: a spine over each eye, two on each side the back and abdomen, and one each side the body.

PLATE LXVI.

Ostracion Tobinii: cœrulescens, subtus argentea: fasciis longitudinalibus nigricantibus, spina utrinque supraoculari, duabus utrinque dorsalibus, ventralibusque unica laterali.

Ostracion Auritus: fuscus spina utrinque supra oculari, duabus utrinque dorsalibus, duabus ventralibus unica laterali. *Shaw Nat. Mis. t. 338. Gen. Zool. v. 5. p. 429.*

Ostracion Striatus: cœruleo flavoque lineatus spina utrinque supra-oculari, duabus utrinque dorsalibus, ventralibusque unica laterali. *Shaw Gen. Zool. v. 5. p. 2. p. 430.*

We have no hesitation in uniting the synonyms of the two species of Ostracion *auritus* and *striatus* of Dr. Shaw under the same appellation as an individual species. This ingenious naturalist indeed appears in doubt upon the subject, but was entirely misled in conceiving it likely that the differences between them could arise from sexual distinction only. The first description which he gave of this extraordinary species was under the name of Auritus, or eared-trunk fish, a name suggested by the singular position of the elevated spines over the eyes, which have been fancifully compared to a pair of ears. This description first appeared in the Naturalist's Miscellany, and was taken, together with the figure by which it is exemplified, from one of the spirit preparations in the British Museum, where it had been deposited by Captain Cook upon his return from one of his voyages of discovery. This fish was considered generally as a native of the Indian Seas, and was described under this persuasion in the Naturalist's Miscellany as an Indian species. The colour of this example of the fish was brown; Dr. Shaw expressly says " the whole animal was a deep brown," and the same description is repeated in the General Zoology of that author, but this discoloration proves to be merely accidental, it arose only from the bad quality of the spirit in which it had been preserved, as Dr. Shaw has since suggested to be very probable.

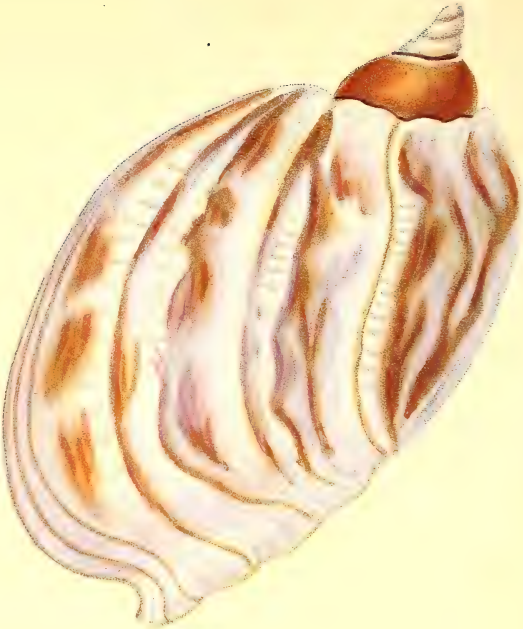
Some time after the first description had appeared, Dr. Shaw was shown a drawing of this fish taken from a recent subject captured upon the coast of Van Dieman's-land by Captain Tobin, the description of which was introduced upon this authority into the General Zoology. Dr. Shaw, the author of that work, produces it as a new species, under the specific name of Striatus; his conclusion in this respect is however qualified with indecision—" Whether this fish," says Dr. Shaw, " be a sexual difference of the preceding or a distinct species may perhaps be doubted; it may also be added, that the Eared Trunk-fish may in reality be no other than the present animal changed entirely in colour from having been long preserved in spirits of wine."

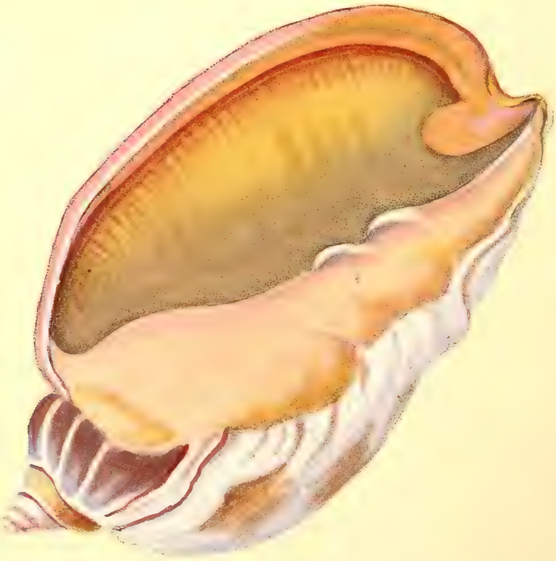
Dr. Shaw has omitted to observe in addition to those remarks, that besides the specimen of this curious fish in the British Museum, there was another example among the fishes collected by Captain Cook in the South Seas and presented to Sir Ashton Lever. This Leverian example, to which we ourselves invited the attention of Dr. Shaw, having been partly exsiccated and preserved in a glazed case, exhibited evidently the traces of the lineations so conspicuous in the recent fish and as expressed in Mr. Tobin's drawing; and Dr. Shaw appeared so well satisfied in this respect, that we rest persuaded had it subsequently devolved to him to discuss the subject, he would have expressed his conviction to that effect. Some years elapsed, after that time, before any other specimens appeared in Europe. About two years ago we received a well preserved and very elegantly charactered example from Mr. George Humphrey, which had been caught on the coast of Van Dieman's-land; and besides that, we have seen two other specimens, one in private hands, the other in the Paris Museum. There is some small variation between these specimens in point of colour and in markings, but they are nevertheless sufficiently characteristic, and leave no doubt as to the identity of the species.

Having ascertained distinctly that those two presumed species, Auritus and Striatus of Dr. Shaw, are individually the same, we conceive it will best obviate the confusion that might arise from retaining either name in preference, to distinguish it as one species only, under the appellation of Tobinii, a compliment to the individual who introduced the first distinct description we possess of the true character of this very extraordinary species.

The fish described by Dr. Shaw is about four inches long, which seems to be nearly the usual size, but we have seen it a trifle larger; and in one instance likewise an accidental variety has occurred, having three spines on one side of the back instead of two on each side. We may upon the whole conclude with observing, that a more singular being than this curious fish can scarcely be conceived, or one more fancifully grotesque when viewed directly in front, the appearance of which is represented in the upper part of the plate.

67





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CONCHOLOGY.

PLATE LXVII.

VOLUTA FERUSSACII

FERUSSAC'S VOLUTE

UNIVALVE.

GENERIC CHARACTER.

Shell unilocular and spiral; aperture without a beak and somewhat effuse; pillar twisted or plaited; generally without lips or perforation.

** Ventricose, spire short.

SPECIFIC CHARACTER.

Shell ovate thick whitish glabrous, marked longitudinally with flexuous testaceous streaks, spire short and conic: aperture orange, pillar lip with two plaits.

VOLUTA FERRUSACII: testa ovato crassa albida glabra, strigis testaceis longitudinalibus flexuosis: spira brevi, conica: apertura aurantia: columella bidentata.

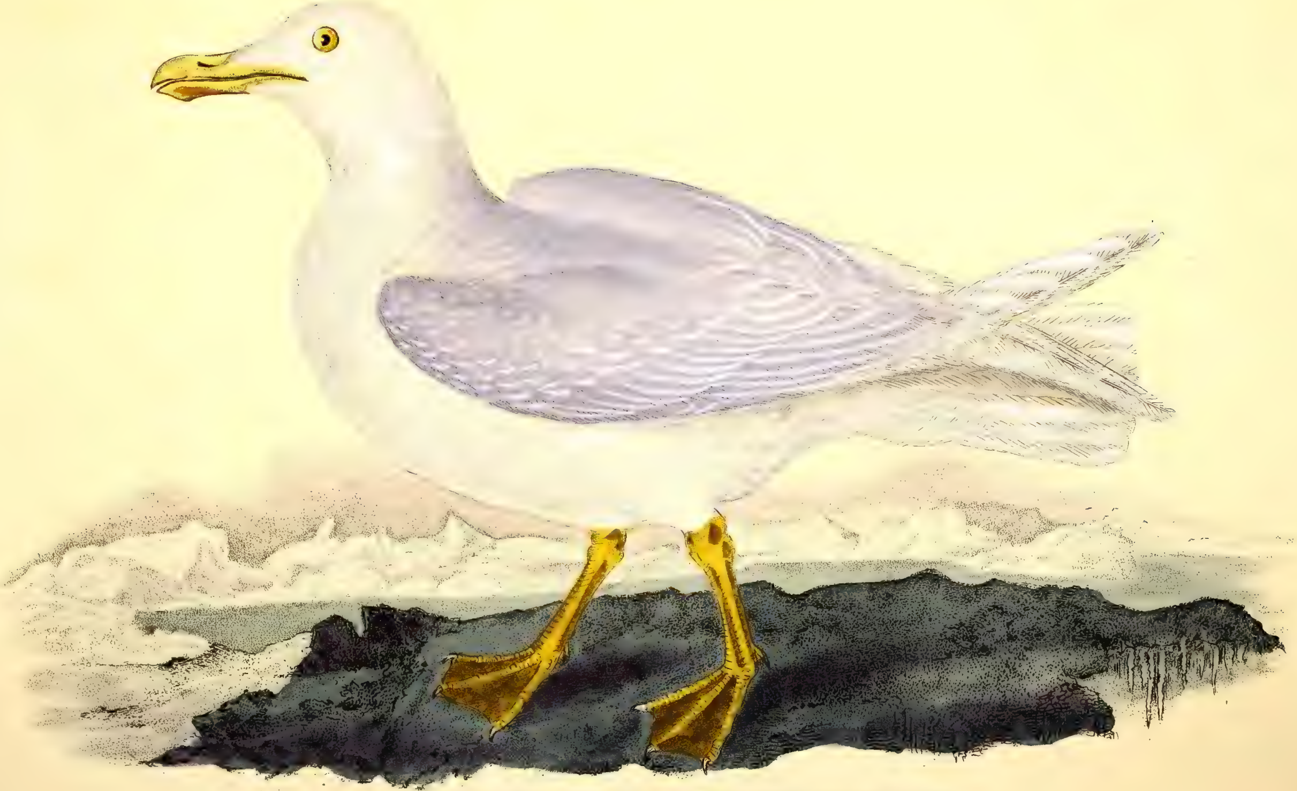
PLATE LXVII.

We have every reason to believe that the species of Voluta now before us must be entirely a new shell, at least we have not hitherto met with a figure or description of it in the work of any author. The native place of this shell is not known with sufficient accuracy to enable us to speak on this point with much precision, it is believed to have been brought from the vicinity of the straits of Magellan. It is by no means a recent acquisition, having been many years in this country, but from the circumstance of having been treasured in a private cabinet it has hitherto remained unknown.

This curious shell, which is represented in its natural size in the annexed plate, it will be perceived is one of considerable magnitude. The colour is whitish, glossy, and to the touch resembles porcelain; externally the shell is slightly rugose, or wrinkled in a longitudinal direction, and is also rather thick and heavy; within, the colour is orange, darkest towards the exterior lip, which is rather thick; the pillar lip effuse. This pillar is besides remarkable for having only two plaits or folds, a circumstance very far from usual, though not entirely without example in the Voluta tribe. In Voluta Magellanica, to which species some collectors who have seen the present shell have imagined they perceived a near affinity, there are four, or perhaps sometimes five plaits upon the pillar lip instead of two, and it besides differs materially in being more ovate and having the spire considerably shorter. There are some indications in the appearance of our shell of its having suffered injury from the attrition of the waves upon a rocky coast or beach of the sea, but had the shell been less perfect, we should have deemed it a novelty of sufficient interest to merit the knowledge of the scientific naturalist.

Persuaded as we are that the present shell is a new and undescribed species, we have named it in compliment to M. B. Ferussac, Member of the French Institute; a Conchologist, whom we have found to possess extensive learning and liberality in the science, and who is besides possessor of a very valuable collection of exotic land and fresh water shells, which are now in a course of periodical publication.

68



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ORNITHOLOGY.

PLATE LXVIII.

LARUS GLAUCUS

GLAUCOUS GULL

ANSERES.

GENERIC CHARACTER.

Bill straight, sharp edged, a little hooked at the tip and without teeth: lower mandible gibbous below the point: nostrils linear, broader on the fore part, and placed in the middle of the bill.

SPECIFIC CHARACTER
AND
SYNONYMS.

White, back and wings hoary; quill feathers white at the extremity; bill yellow, at the angle saffron.

LARUS GLAUCUS: albus, dorso alisque canis, remigibus apice albis, rostri flavi angulo croceo. *Oedm. nov. act. Stockh.* 1783. *n.* 1. *p.* 96. *n.* 1. *Gmel. Syst. Nat.* 1. 600. 17.

PLATE LXVIII.

LARUS GLAUCUS: albus dorso et alis canis remigum extremitatibus albis. *O. Fabr. Fn. Groenl.* 100. 64.

LARUS ALBUS: *Olafscens Isl. Soröe.*

Larus Glaucus. Glaucus Gull. *Lath. Syn. t.* 3. *p.* 2. 373. *Ind. Orn.* 814. 7.

GLAUCOUS GULL: *Ross' Voyage to the Arctic Regions. Appendix. n.* 4. *Linn. Trans. vol.* 12. 543.

BURGERMEISTER: *Marten's Voy. Spitz. A. D.* 1671.

The great public interest excited by our late expeditions towards the arctic regions of the globe have conferred an importance on its results which unquestionably under ordinary circumstances could not have been expected. As a voyage of discovery, its laudable endeavours have been by no means amply rewarded, but at the same time it must be confessed, that it has aroused that spirit of research which on some future occasion of the like nature may be productive of a more successful issue. There is nothing, however trivial, that had occurred in the department of Natural History during those interesting voyages which has not obtained from the British public the most minute attention; and with respect to the science of Ornithology in particular, the more immediate object of our present views, it cannot but afford us a peculiar pleasure to observe the satisfaction with which it has been considered, since our own labours had so largely anticipated the observations which have subsequently appeared in the relations of those voyages. The truth indeed compels us to observe, that there was scarcely one of the feathered race procured in the course of those perilous voyages that were not already well known to every British Ornithologist as inhabitants of our own country, through the medium of various publications, and of our own among the number, nor any that were not to be found extant for years previous to that period in our own Museum; and this in point of candour can be considered only as a priority of publication, since every naturalist had been invariably allowed an unreserved access to that extensive depository of Natural History *.

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* Captain Sabine in his Memoir on the birds of Greenland, inserted in the 12th volume of the Linnæan Transactions, enumerates fifty-four species› twenty-eight of which he observes had passed under his own observation› and of the remaining twenty-six species which he did not meet with, six he remarks were not even seen by Fabricius, and others are unquestionably rare in Greenland. This enumeration of the Arctic birds is useful and valuable, because it leads us to an extensive knowledge of the Ornithological productions of those inhospitable regions, but we conceive it will not be deemed amiss to add, that very nearly the whole of the fifty-four species therein enumerated are natives of our own country, though many are very rare; forty-eight of the species were included in our Museum, and probably the remainder, but under some other appellations; and so far from this northern voyage, so interesting in some particulars, having been productive of much novel information to the English naturalist, we may also add, that the greater part of those had appeared several years before in our work entitled "The Natural History of British Birds." There is a total silence among all the writers who have treated upon the subject of those northern acquisitions, as well respecting our collection of those birds as the publication in which they are described and figured, that may fully justify our observation, a silence we ought not most likely to impute to illiberality but certainly at least to a want of information.——Perhaps it may be considered that Larus Sabini was an exception to the generality of this remark, but it was not, a specimen of this interesting bird, which had been killed in England in the winter of the year 1807, had a place in our collection for the space of some years, under the name of Larus nigripes.

PLATE LXVIII.

With respect to the bird now before us, the Ornithological readers will observe that it is not a species absolutely recorded among the indigenæ of this country, although there may be some reason to believe in another state of plumage it may have a claim to our consideration as a native of northern Britain. We shall at present view it as an arctic acquisition only, and in this respect it is perhaps one of the most interesting among the number of those which occurred to the observation of our late British navigators. It was observed by Captain Ross in various latitudes, from 65 degrees to 76 degrees, north, in his late voyage in search of a north-west passage, and in exploring Baffin's Bay; and is in particular recorded among the natural productions of those regions in the narrative of his voyage under the name of Larus Glaucus. We may also add that it is the Larus Glaucus of the Linnæan Transactions, in which those northern birds have been again considered, and of various other publications which have treated on the same subject. Larus Glaucus, if it be truly the Burgomaster of Martens, was a well-known species a century and a half ago, but it may be satisfactory to know that the individual example now before us, the subject of our present delineation, is one that had been captured during the voyage of Captain Ross by an officer engaged in that expedition, and we are thus assured of the identity of the bird as one of the recent northern acquisitions.

Before we enter upon the description of this interesting example of the Arctic Ornithology, it may not be amiss to observe, that few birds have been productive of more dispute among the later writers than those different species and varieties of the Gulls and other maritime birds which were discovered in the higher northern latitudes during this voyage of Captain Ross, and it would have proved indeed a singular exception if Larus Glaucus had escaped the same "elucidation into obscurity." Upon the return of the expedition those northern acquisitions were deposited in the British Museum, excepting only such duplicate specimens as were retained by the officers engaged in the voyage and distributed among their friends. Those birds, as already intimated, were subsequently described in the addenda to the narrative of that voyage by Capt. Ross, and Dr. Leach, then of the British Museum: by Captain Sabine in the Linnæan Transactions; and in various literary journals and other publications. Those descriptions and observations have again given rise to discussions among other writers, and have thus ultimately led to differences of opinions that cannot now be very easily reconciled. With respect to the bird before us, the more immediate object of our present consideration, they have consented generally to denominate it the Glaucous Gull, but they differ widely as to its presumed congeneries or varieties: affinities altered, as it is presumed, from the effects of climate, or differing according to their age and sexual distinctions. Mr. Temminck, under the species Larus Glaucus presents us with an ample list of synonyms, which he conceives belong to this bird in the adult state, and also of such as he considers to be the bird in a less mature state, as well as in its first state of plumage, and likewise the differences which he attributes to the effect of climate. This writer identifies his Larus Glaucus with that of Latham's Index Ornithologicus, at the same time that he rejects most of the synonyms Dr. Latham has collected, with a pointed declaration that nearly all are wrong *. Mr. Temminck

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* "*Lath. Ind. v.* 2. *p.* 814. *sp.* 7. mais presque tous les synonymes faux." *Temminck Manuel d'Ornithologie, p.* 758. And further it may be

refers however to the Larus Glaucus of the Linnæan Transactions as his type of the species, and is again in his turn contradicted by Captain Sabine, the writer of that paper, in a passage no less explicit—" the Larus Glaucus of Temminck is not quoted here, because it will be afterwards shown to be of a different species;" vol. 12. p. 544. and he proceeds accordingly in his endeavours to show that the Larus Glaucus of Temminck is no other than a Herring-gull (Larus Fuscus), so that according to this observation we should again dissent from Temminck, even in the admission of the few synonyms of Dr. Latham, which he had before considered as correct, or we should confound the Glaucous and the Herring-gull of Dr. Latham as the same species. Nor do all the difficulties started by writers on this subject terminate at this point, the appendix of Captain Ross and the addenda of Dr. Leach in the Zoological memoranda of that voyage affords some curious matter for our further observation, for while in one place we are taught to consider the Larus Glaucus as an abundant species of Gull, from lat. 65. to 72. we meet with another remark in the succeeding lines that seems at least to render this information doubtful, and afford us some reason to imagine, if it can be possible, that under the name of Larus Glaucus they had previously intended another bird, for it is said "*July* 11*th. in lat.* 74. *two females were shot,*" and "*These are the only two birds*

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added that Mr. Temminck excludes from among his synonyms the following references which Gmelin has arranged under his species Glaucus. *Oedm. nov. act. Stockh.* 1783. *n.* 1. *p.* 96. *n.* 1.

Larus Albus. *Olaff. isl. p.* 356. 572.
Larus Hyperboreus. *Linn. Finm. cum Not. Gunner, p.* 283.
Larus Cinereus. *Briss. av.* 6. *p.* 160. *n.* 2.
And of the Fabrician synonyms, Larus Glaucus. *Mull. prodr.* 169.

that answer to the Larus Glaucus of LINNÆUS." Here the confusion becomes in an eminent degree increased, for *Linnæus has no such bird as Larus Glaucus!* and we must confess we are at a loss to afford this passage any probable interpretation. It could scarcely be intended that only two of those birds in the adult state had occurred, and those females, for we are perfectly aware, upon other authority, that at least several of those birds in the adult state, as well males as females, were killed in that expedition and brought to England by the officers.

From every information that we have been enabled to collect, the Glaucous Gull is found in all the higher northern latitudes as far as as 70 degrees, and much of the confusion that has arisen respecting the species appears to have originated from the different appearances which the plumage assumes in the various stages of its growth, the species undergoing the same changes as are observed in other species of the Gull tribe, in addition to the more complete and decided change which marks the severer season of the arctic winter, for at that period it is said to become almost pure white, losing the distinctive character of the black marks or colouring of the quill feathers, and retaining only the cinereous plumage of the back. The young of the Larus Glaucus are clouded and spotted with brown, those marks or spots disappearing in its progressive change towards the adult state in the same manner as we observe in the progressive growth of other birds of the same tribe. In the mature state the Glaucous Gull may be considered in point of size as holding a middle station between the *Larus Marinus* or Black-backed Gull and the Herring-gull (Larus Fuscus). The specimen of the Glaucous Gull which we have now before us rather exceeds in magnitude the largest of our Herring-gulls; we have a pair of the Black-backed species nearly of the same size, but a single example of the latter in our possession is larger than the Glaucous Gull. The comparative size of those birds, which must be considered as a general rather than an absolute criterion, may be estimated thus; the Black-backed Gull from twenty-five to twenty-nine or thirty inches, the Glaucous Gull twenty-five inches, the Herring-gull twenty-two inches.

We cannot conclude these observations without remarking, that amidst the conflict of opinions respecting the identity of this species under the disguises of its different states of plumage, it is uniformly admitted to be the bird which Martens described under the name of Burgomeister in his voyage to Spitzbergen, more than a century and a half ago; perhaps this conclusion may be accurate, but we cannot avoid observing, that in the bird described by Martens there were some considerable differences.* In the latter among other exceptions, it is mentioned that though the wings are said to be pale, with the tips white, it is probably to be understood that like other Gulls the quill-feathers were dark or black, and only the tips of the feathers white, and this idea is rendered the less improbable from the ambiguous manner in which the wing is expressed by the engraver of the plate in Martens' work; but in the bird before us all the quill feathers are entirely of a pure white, and this circumstance is observable we believe in every other specimen that has been brought to this country by our northern navigators. We shall not hastily conclude from the absence of the black upon the quill feathers that the Burgomeister of Martens are not the same as the Glaucous Gull of modern Ornithologists, but the difference deserves our recollection. We are quite aware that such differences may result from the effects of climate, as we find exemplified in various instances, and of which the difference between the summer and winter plumage of the Ptarmigan, and the fur of the variable Hare are prominent examples, even in our own country; but we cannot avoid observing, that under such changes there would be some difficulty in defining the distinctive line between this bird and a smaller individual of Larus Marinus in the winter plumage. Mr. Temminck and others, admit that the Silvery Gull, Larus Argentatus of the northern regions, is no other than the Herring-gull, in which the black colouring of the quill feathers, so conspicuous in the examples that reside upon our own shores and the more southern coasts of Europe, has become obliterated by the effect of a northern climate. Are we quite assured that the like effect may not be produced upon the Larus Marinus from correspondent causes, and thus produce at least a very near affinity to the winter state of the Glaucous Gull? It has been already observed, that this interesting bird, the Glaucous Gull of our late writers, is an inhabitant of all the maritime parts of the higher northern latitudes of Europe, nearly to the arctic circle; it is described as being the largest of the Gull tribe, and from its audacious conduct and superiority has obtained the name of Burgomaster. It preys on the young puffins and all the smaller kinds of birds, on the flesh of the whales, seals, and other marine animals, and on the dung of the walrus. Those Gulls reside on the lofty cliffs of the rocks upon the sea shore, and are described, if the species be not mistaken, as having a hoarse voice, like that of the common raven.

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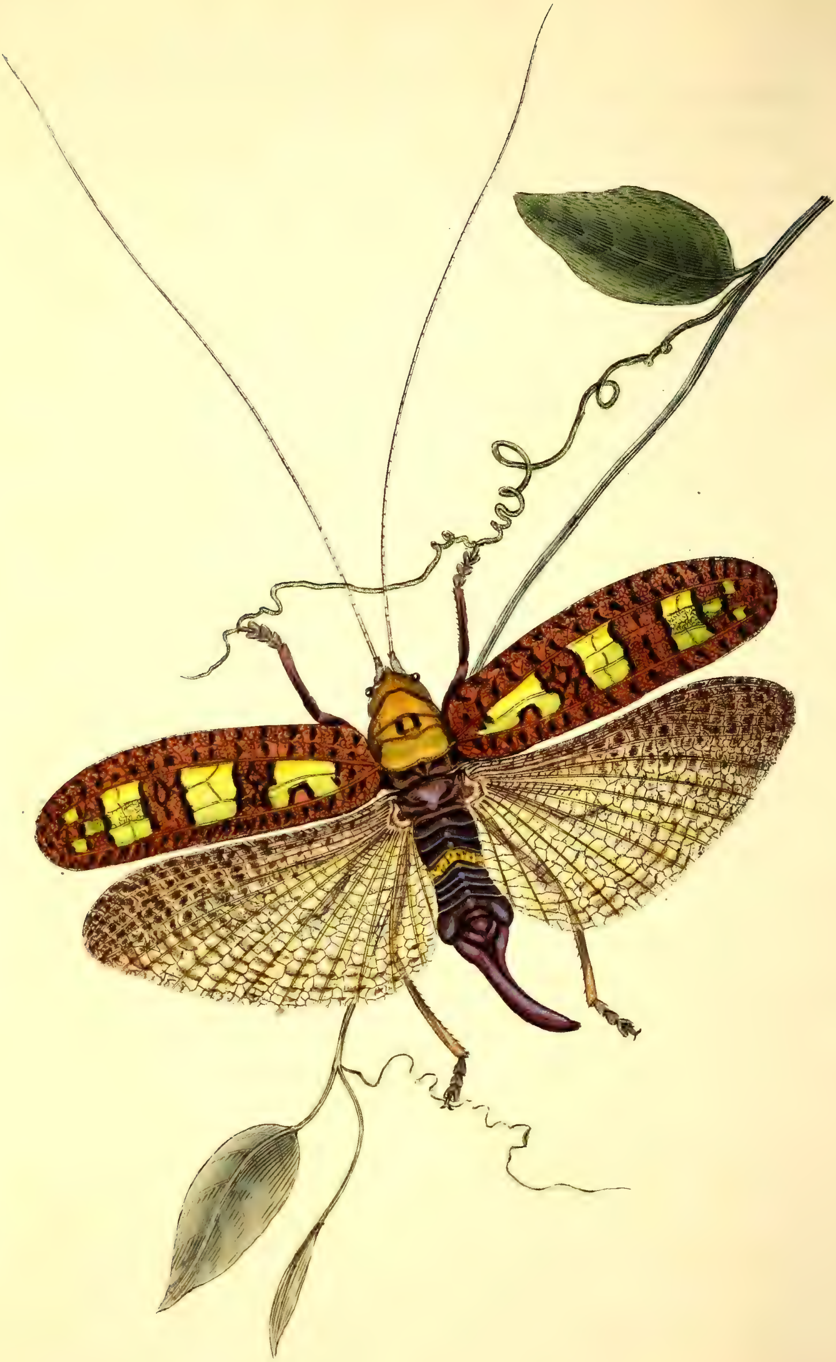
* Burgermeister (in English Major) is the biggest of all the the birds of Spitzbergen, wherefore his name is given him as being the chief of them. His bill is crooked, of a yellow colour, narrow and thick; his under bill is somewhat rising or knobby at the point or end, a great deal more than the Kutge-chefs which looketh very pretty, as if he had a cherry in his mouth; he hath longish nostrils and a red ring about his eyes; *he hath but three claws of a grey colour; his legs are grey and not quite so long as those of a stork, yet he is almost equally big with him. His tail is broad like a fan, and white,* which is chiefly to be understood of these birds when they fly: his wings are of a pale colour, and so is all the back, *but his wings are white at the tip,* and so is the whole body. *Marten's Voyage, part* 4.

Burghermeister Spitsbergensis. Frid. Martens in omnibus fere cum Laro nostro cinereo maximo convenit, præter quem quod postico digito careat. *Ray. Syn. av.* 127.



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ENTOMOLOGY.

PLATE LXIX.

GRYLLUS DONOVANI

DONOVAN'S LOCUST

HEMIPTERA.

GENERIC CHARACTER.

Head inflected, armed with jaws: feelers filiform: antennæ setaceous or filiform: wings deflected or convolute: the lower ones plaited: hind legs formed for leaping: claws double.

* Antennæ setaceous.

SPECIFIC CHARACTER.

Wing-cases rufous brown, with black spots, and three large green blotches disposed longitudinally on each: antennæ very long.

GRYLLUS DONOVANI: elytris rufo-fuscus maculis nigris, lituris magnis tribus viridis longitudinaliter positis: antennis longissimis.

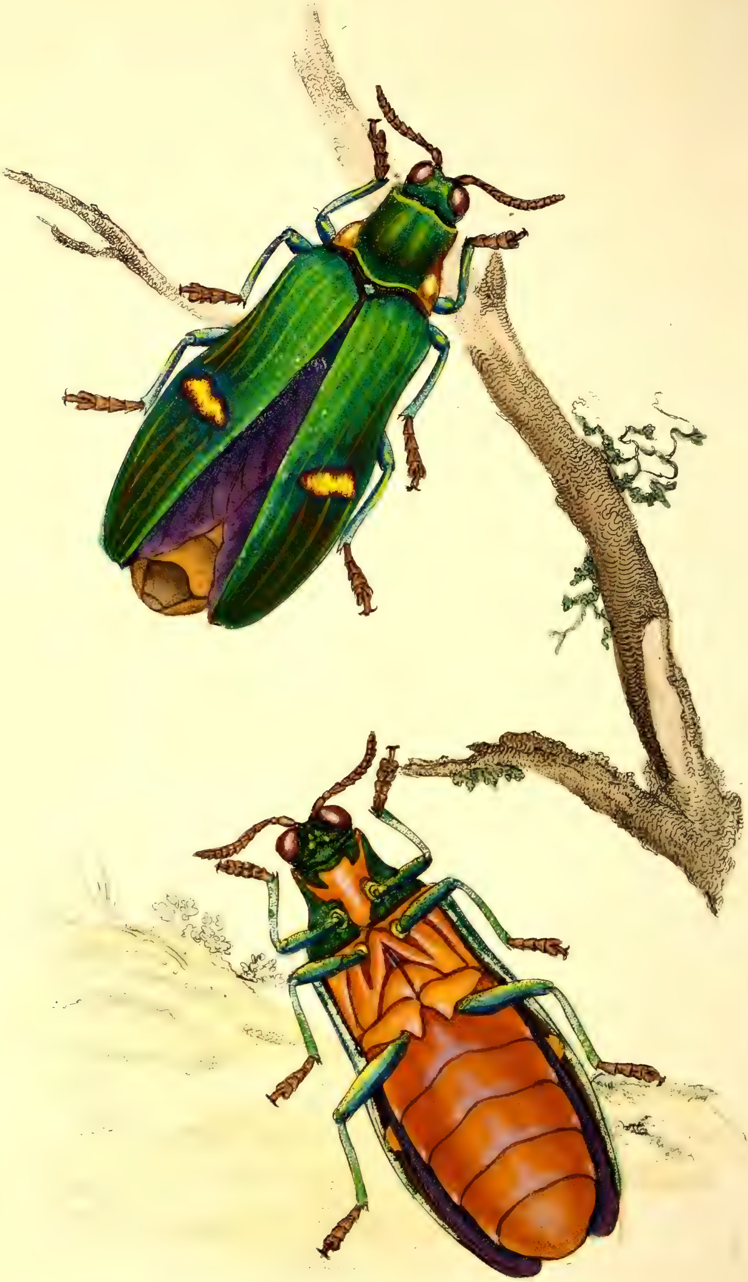
The appearance of this Locust is particularly elegant, and very dissimilar from that of any other species of its tribe with which we are acquainted; and it may also be added with perfect confidence that the species is new and undescribed. At this period only three examples of this interesting insect we believe are known, two of which are of the female sex, and one the male; they were brought to

England in a collection of insects reputed to have been formed by a gentleman in India, and are presumed upon this authority to be natives of that country. The male insect and one female were consigned to the cabinet of Alexander Mc. Leay, Esq. the other specimen is in our possession. The male is smaller than the female, and is as usual in that sex destitute of the ensiform tube or projection so conspicuous at the extremity of the female, this being the organ through which the eggs are conveyed from the ovary of the female parent, and deposited by her in the earth. In every other respect the appearance of the male is not very different from that of the female.

The accuracy of the annexed figure may render any minute detail unnecessary; the antennæ, it will be observed, are of very unusual length, and sestaceous, and the eyes small; the head and thorax testaceous, tinged with greenish; the wing-cases rufous brown, reticulated with black incurvate spots. Upon each of the wing-cases are three large spots or blotches, of a somewhat quadrangular figure and of a delicate green colour, which form a striking contrast with the other prevailing colours of the insect. There is also a band or belt of the testaceous hue that encircles the abdomen about the middle, which may probably have been of a green colour in the living state. The posterior wings are hyaline, tinged with brown, and are reticulated and spotted with darker fuscous.

With respect to the appellation under which the insect now appears, we have only to observe that some very respectable naturalists to whom a description of this rarity was lately communicated have suggested its propriety, and as we are not entirely disinclined to believe our entomological labours undeserving of the intended compliment, we apprehend respectfully there can be no objection to the adoption

10



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ENTOMOLOGY.

PLATE LXX.

BUPRESTIS BICOLOR

TWO-COLOURED BUPRESTIS.

COLEOPTERA.

GENERIC CHARACTER.

Antennæ filiform, serrate, as long as the thorax: feelers four filiform, the last joint obtuse or truncated: head partly retracted within the thorax.

SPECIFIC CHARACTER
AND
SYNONYM.

Wing cases acuminated brassy green, with a yellow spot: breast and abdomen yellow.

BUPRESTIS BICOLOR: elytris acuminatis viridi œneis: macula flava, pectore abdominique flavis. *Fabr. Spec. Ing.* 273. 2. *Ent. Syst. t.* 1. *p.* 2. 185. 2.

PLATE LXX.

This extraordinary species of the Buprestis genus has every claim to the attention of the naturalist, whether we regard it as one of the largest insects of its tribe, or as an insect of great beauty and uncommon scarcity. This curious beetle formed originally a portion of the fine cabinet of insects collected by that venerable English collector, the late Mr. Drury, but at the time of Mr. Drury's death, which happened rather less than twenty years ago, it became the property of Alexander Mc Leay, whose invaluable collection it now enriches. It is worthy of remark, that notwithstanding the length of time during which it remained in the possession of Mr. Drury and the time elapsed since that period, it has remained unique in this country, and probably in Europe. The species has been made known through the medium of the Fabrician writings, but with this exception the particulars of this species yet remains in some obscurity. Fabricius refers to the works of Olivier for a figure of this insect, but there is no figure of it in that publication, and the only conclusion we can form upon the subject is that such a figure, though intended to have been produced in the works of Olivier, never did appear.* Fabricius acknowledges that his description was taken from the specimen in Drury's cabinet, adding at the same time that it is a native of America. From the manuscripts of Mr. Drury now in our possession, its habitat is rather more explicitly expressed: Mr. Drury had purchased this curious insect of Mr. Humphrey, in the year 1772, and he believes it was from Surinam, but he is not entirely assured in this particular. Hence it appears the species may be an inhabitant of South America, but the expression of Fabricius, "*habitat in America*," is less explicit than may be desired.

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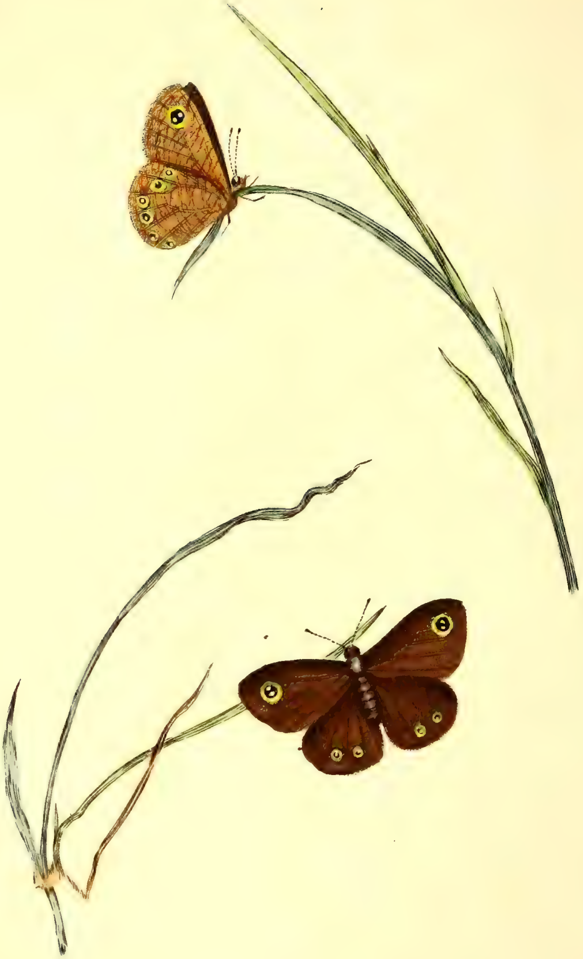
* Oliv. 33. tab. . fig. .

71



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ENTOMOLOGY.

PLATE LXXI.

PAPILIO LARA

LARA BUTTERFLY

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and usually terminating in a club: wings erect when at rest. Fly by day.

** Pleb. rurales.

SPECIFIC CHARACTER

AND

SYNONYM.

Wings entire subtestaceous; first pair with a single ocellar spot or eye above: second pair with two.

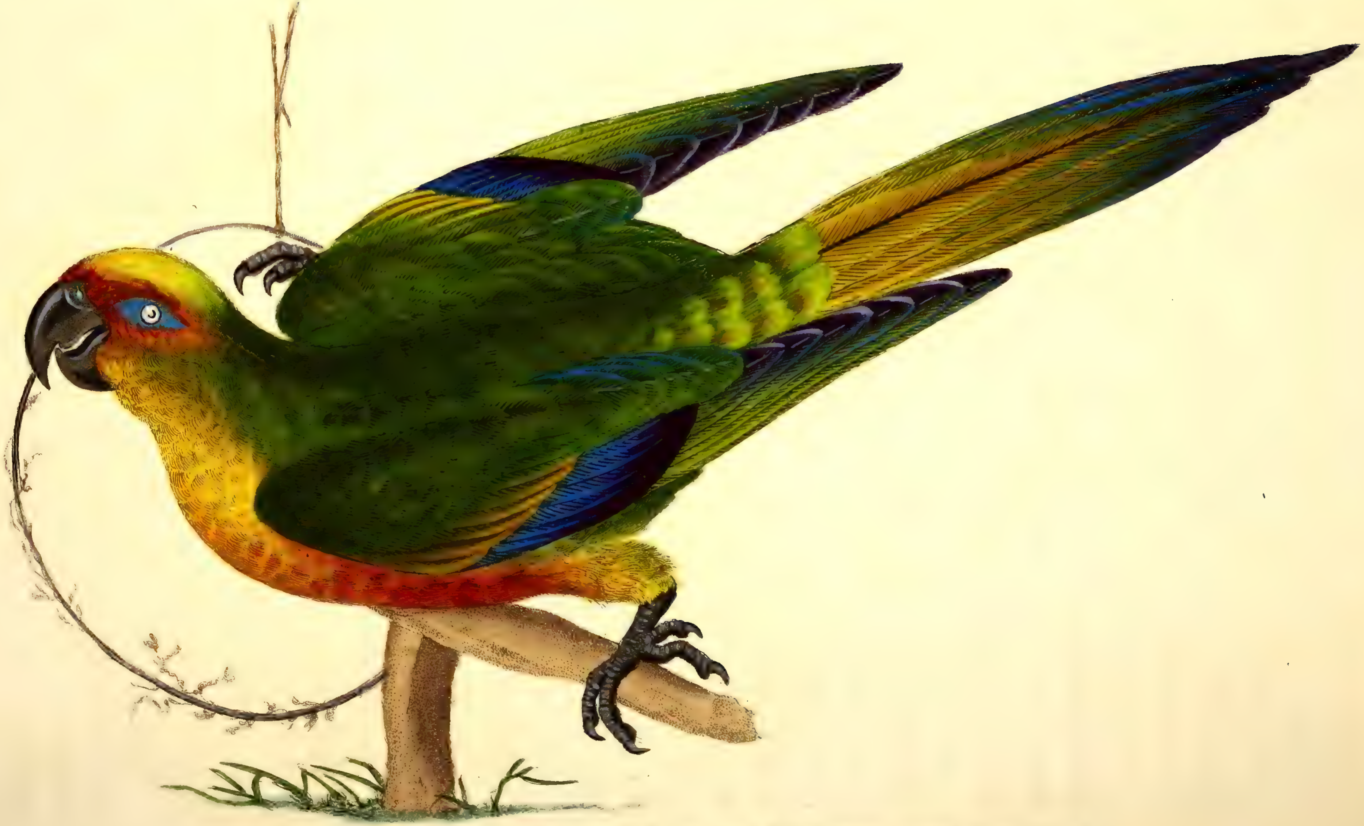
Papilio Lara: alis integerrimis subtestaceus: primoribus supra uniocellatis; posticis supra biocellatis. *Linn. Mus. Lud. Ulr.* 320. *Syst. nat. edit.* 12. *t.* 1. *p.* 2. 791. *n.* 237.

PLATE LXXI.

The present plate is dedicated to the representation of a species of the Papilio tribe, which does not appear in the work of any author. Although of the minor size and obscure appearance, it is an insect of no inconsiderable interest; it is a described Linnæan species of which no figure is previously extant, and for this reason cannot fail to prove an acceptable article in elucidation of the works of that inestimable naturalist, since it could only be before known from the very concise description which appears in the above quotation. Our figures it should be added, is copied from the individual specimen described by Linnæns, in the Linnæan cabinet, which is at this time in the possession of Sir James Edward Smith, President of the Linnæan Society. The late Mr, Jones, of Chelsea, had taken a drawing of this insect, by permission of its worthy proprietor, and it is from this drawing of Mr. Jones that our present figures are copied.

It appears from the Catalogue of Natural History, in the Museum of the Queen of Sweden, written by Linnæus, as above referred to, that there was a specimen of this insect in that collection, and we further learn from the same work that it had been brought by Tulbagh from the Cape of Good Hope, the country it inhabits.

The figures which appear in the annexed plate may render any minute description of this curious insect superfluous; they afford delineations as well of the lower as superior surface, and may be found of some utility in the illustration of a species which Linnæus has described in a few words only. The Fabrician description is no other than a repetition of that of Linnæus, and must lead us to the conclusion that the insect itself was known to him only through the Linnæan writings.



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ORNITHOLOGY.

PLATE LXXII.

PSITTACUS AUREUS.

GOLDEN-CROWNED PARRAKEET

PICÆ.

GENERIC CHARACTER.

Bill hooked, upper mandible moveable and usually covered with a cere; nostrils: placed in the base of the bill: tongue fleshy, obtuse, entire: feet formed for climbing.

SPECIFIC CHARACTER

AND

SYNONYMS.

Green: cere and orbits blueish carnation: crown golden: wing coverts with an oblique blue stripe.

PSITTACUS AUREUS: viridis, cere orbitisque ex cærulescente incarnatis, vertice aureo, tectricibus alarum fascia, obliqua cærulea. *Gmel. Linn. Syst. Nat.* **1.** *p.* 329. 87.

Psittaca Brasiliensis. *Briss. av.* 4. *p.* 337. *n.* 61.

PLATE LXXII.

An elegant and very curious species of Parrakeet, an inhabitant of Brasil, but of rare occurrence. The length of this bird from the top of the bill to the end of the tail is eleven inches, the prevailing colour of the plumage above fine green, beneath red, intermixed with green. The bill is blackish and the legs dusky. The most striking peculiarity of the species is the fine golden yellow of the crown, whence it has obtained the name of Aureus or golden-crowned Parrakeet.

223

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